Chapter 4

Smoothing the transition period and increasing pension contributions in Mexico

The sharp drop in pension benefits to be expected after the transition period from the old defined benefit (DB) system to the new defined contribution (DC) system may lead to disillusionment with the new DC pension system. This sharp drop is the result of low contribution rates, which were set at levels similar to those existing before the reform, and high promises to transitional workers based on the old DB formula. In this context, people with similar labour histories separated by a few months would have drastically different pension benefits. Moreover, the low coverage rates and contribution periods compound this problem. This chapter explains how this situation comes about and presents alternatives to smooth-out the transition period. The chapter also discusses approaches to increase coverage, contribution levels and contribution periods.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

The Mexican pension system faces a potentially explosive challenge stemming from a combination of low contribution rates and high promises to transitional workers. As the previous chapter argued, the pension benefits granted under the old defined benefit (DB) formula are high relative to the contribution levels. Moreover, pension benefits under the defined contribution (DC) rules will be lower than what people may expect, and definitively much lower than those under the old DB formula. This two together translate into a sharp fall in pension benefits after the transition period ends. In this context, people with similar labour histories separated by a few months would have drastically different pension benefits. Moreover, short contribution periods and low contribution densities compound the problem.

This chapter explains how this potentially explosive situation comes about and presents alternatives to smooth-out the transition period. The chapter also discusses approaches to increase coverage, contribution levels and contribution periods. The discussion in the chapter draws directly from the OECD's best practices contained in the OECD Roadmap for the Good Design of Defined Contribution Pension Plans and the OECD Pensions Outlook 2012 and 2014.

The chapter starts illustrating the sharp falls in replacement rates that are expected for private and public-sector workers after the last transitional workers retire. It then shows that short contribution periods and low contribution densities compound the problem. In section three, the chapter shows that voluntary contribution levels are not sufficient to offset the fall in replacement rates.

The chapter then assesses two policies commonly implemented to promote higher voluntary retirement savings in OECD countries (OECD, 2012): the tax treatment of retirement savings and the pension statement. The analysis argues that the tax treatment of retirement savings in Mexico fails to create the appropriate incentives for people to make additional voluntary contributions. In addition, the pension statement that CONSAR requires AFORE to provide to members contains a lot of relevant information, but it does not seem to engage members and encourage them to take active steps to improve retirement income adequacy by, for example, increasing contributions and/or postponing retirement. The chapter ends presenting proposals to increase mandatory and/or voluntary contributions, to smooth-out the transition period, to increase coverage and contribution densities, and to improve the public's understanding and confidence in the pension system.

4.1. Sharp falls in replacement rates are expected after the last transitional worker retires

4.1.1. Private-sector workers

Private-sector workers who were working and contributing to the PAYG system in place before 1 July 1997 have the right to choose a pension calculated according to the old DB formula upon retirement. Although these workers began contributing to their new mandatory individual retirement accounts after this date, they retained the right to choose between getting their pension benefits calculated using the old formula at retirement or using the DC balances. The rules for the old DB formula for private-sector workers were described in Box 3.1 (Chapter 3). A worker with a final salary equal to four times the minimum wage for example, can expect to replace 100% of that final salary after 45 years of contributions. Moreover, the previous chapter argued that those replacement rates are generous given contribution rates and contribution periods.

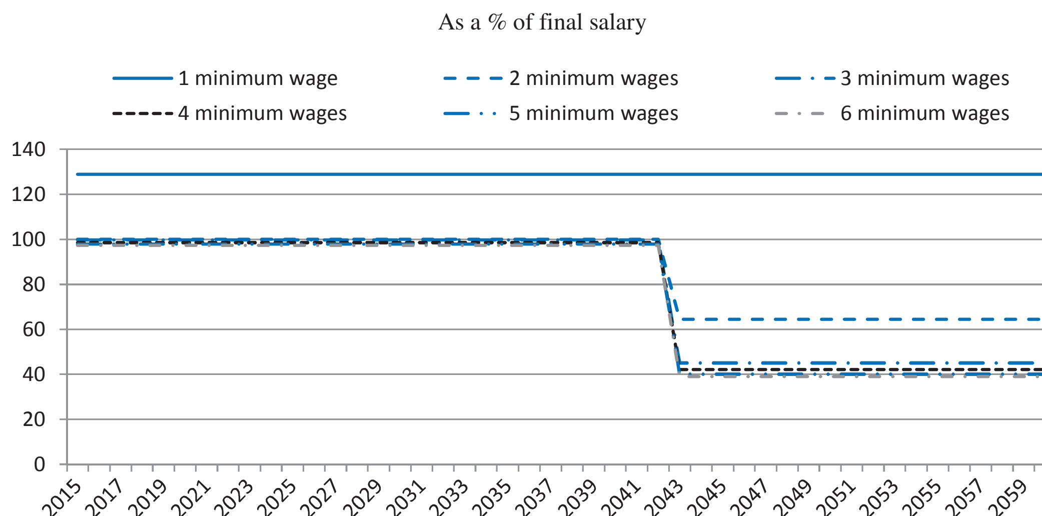
Pension benefits from DC individual accounts, given current mandatory contributions and realistic rates of return on portfolio investment, may be much lower than those from the DB formula. Hence, private-sector workers who entered the labour market after July 1997 will have much lower benefits despite having the same contribution rates and contribution period. According to the OECD pension model (OECD, 2015b), a private-sector average earner entering the Mexican labour market in 2014 and contributing to the pension system continuously from 20 to 65 years old can expect to replace 26% of his/her final gross earnings, assuming a real rate of return after administrative charges of 3% per year, compared with 100% under the old DB formula. For a minimum-wage earner, the replacement rate would increase to 71%.[1,2]

According to the OECD pension model, in order to achieve a replacement rate in the new DC system equivalent to 100% under the old DB formula over a 45-year contribution period for the average earner, one would need to assume a real rate of return of 8% or a contribution rate of 29%.

Given the difference in retirement income and replacement rates between the DB formula and the DC rules, it is expected that the vast majority of transitional private-sector workers will choose the old DB formula when claiming their benefits at 65. Indeed, over the period 2003 to 2014, less than 1% of the workers have chosen the DC rules (Chapter 3).[3] Therefore, it is likely that by the year 2042, most transitional workers will have retired and chosen the old DB formula. There would be a sharp fall in replacement rates once the last transitional worker retires and all new retirees get their pension benefits according to the assets accumulated in their DC accounts. Using CONSAR model for projecting DC replacement rates, Figure 4.1 illustrates the fall in replacement rates that one can expect for private-sector workers with 40 years of contributions earning above the minimum wage up to six times the minimum wage and retiring over the next 45 years. The higher the lifetime earnings level the sharpest the fall. The difference would reach about 60 percentage points for people earning six times the minimum wage. On the contrary, replacement rates for workers earning the minimum wage will not fall when the transition period is over. Workers earning the minimum wage can choose between the minimum guaranteed pension (PMG) in the DC system and the minimum pension in the old DB system, which it is lower. The PMG represents 129% of the minimum wage.

Figure 4.1. **Evolution of replacement rates for private-sector workers retiring at 65 between 2015 and 2060, with 40 years of contributions and earning 1 to 6 times the minimum wage**

As a % of final salary



Note: The replacement rates for people retiring under the new DC system (as of 2043) are calculated assuming a 40-year career with a flat salary, 1.19% fees, 5.19% real rate of return and the progressive social quota in force during the period November to December 2014. After the transition period is over, only private-sector workers earning one to two times the minimum wage would receive the minimum guaranteed pension.

Source: CONSAR.

A combination of low contribution rates to mandatory individual retirement accounts and high promises to transitional workers explains this potentially explosive situation. Contribution rates to the retirement sub-account vary from just over 7% to 13.6% depending on the social quota. The contribution rate for private-sector workers is 6.5% of the basic salary for contributions. When adding the progressive social quota, the total contribution rate increases for people under 15 times the minimum wage, up to 13.6% for very low-income workers (see Table 4.1). During the last quarter of 2014, 89.1% of the private-sector workers affiliated to the IMSS with an active account received the social quota.[4]

Table 4.1. **Contribution rates for private-sector workers, according to multiples of the minimum wage**

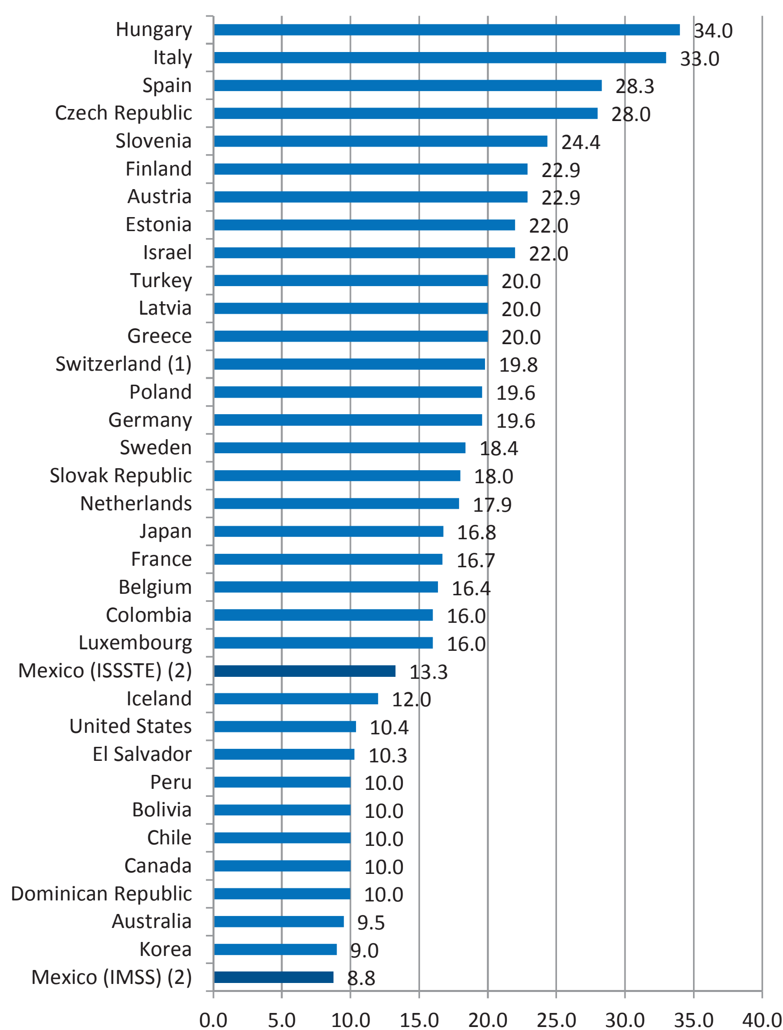
	1 minimum wage	3 minimum wages	5 minimum wages	10 minimum wages
Retirement, severance and old-age	6.5	6.5	6.5	6.5
Worker	1.125	1.125	1.125	1.125
Employer	5.150	5.150	5.150	5.150
Federal government	0.225	0.225	0.225	0.225
Social quota*	7.106	2.270	1.303	0.622
Total	**13.606**	**8.770**	**7.803**	**7.122**

Note: The calculation uses the progressive social quota in force during the period November to December 2014.

Source: Author’s calculations.

The contribution rate in the Mexican pension system is low by international standards. Figure 4.2 shows the total contribution rate in Mexico for a worker earning three times the minimum wage (8.77%) in comparison with other countries. It ranks last among the selected OECD and non-OECD countries with available information on the contribution rate to mandatory pension plans. In many other Latin American countries, mandatory contribution rates are around 10% (for example, Bolivia, Chile, Dominican Republic, El Salvador, and Peru). In 14 countries, the contribution rate to the mandatory pension system ranges from 16% to 20%. Italy and Hungary are extreme cases where the contribution rate to the mandatory pension system is above 30%.

Figure 4.2. **Contribution rates in mandatory pension plans, selected OECD and non-OECD countries, 2012 or latest available data**



1. The contribution rate to mandatory occupational pension plans varies across age groups, from 7% between 25 and 34 years old to 18% beyond 55 years old. The graph uses the rate of 10% (for people aged 35 to 44).

2. Numbers for Mexico include state contributions and the social quota for workers with a wage equivalent to 3 times the minimum wage.

Source: OECD (2013) and OECD/IDB/The World Bank (2014).

4.1.2. Public-sector workers

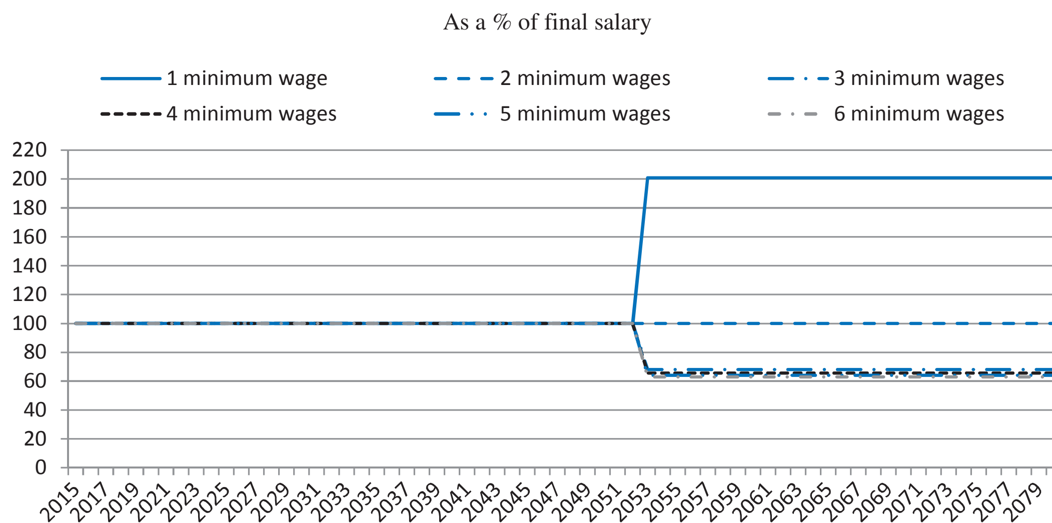
All public-sector workers who were ISSSTE affiliates at the time the ISSSTE Law was approved in 2007 had the right to choose to switch to the new funded DC system or to remain in the old PAYG DB system. Those workers who decided to remain in the DB system continued contributing to the ISSSTE to finance the PAYG system, but some rules of the DB system were changed. The minimum retirement age is being increased gradually from 50 to 60 by 2028 and the contribution rate of workers for retirement, severance at old-age and old-age has increased from 3.5% to 6.125% of the basic salary for contributions over the six years following the reform. The rules for the current DB formula for public-sector workers were described in Box 3.2 (Chapter 3). Men with at least 30 years of service and women with at least 28 years of service are entitled to a retirement pension equivalent to 100% of the average basic salary of their last year of service.

Pension benefits from DC individual accounts, given current mandatory contributions and realistic rates of return, may be much lower than those from the DB formula, for the same contribution rate and contribution period. Hence, public-sector workers who entered the labour market from April 2007 and those from the transitional cohort who chose to get their benefits according to the DC rules can expect much lower benefits. According to estimations from CONSAR, a public-sector worker entering the Mexican labour market in 2014, earning four times the minimum wage and contributing to the pension system continuously for 40 years can expect to replace 65.6% of his/her final earnings, assuming flat salaries. With three times the minimum wage, the replacement rate increases to 68.1%.[5] These estimations do not account for the Solidarity Savings state matching contribution.[6] Replacement rates obtained according to the new DC rules are therefore lower than replacement rates obtained according to the current DB formula (100%), for the same contribution rate and contribution period.

As the majority of public-sector workers who were affiliated to the ISSSTE in April 2007 chose the DB system, a sharp fall in replacement rates is expected after the last transitional worker retires. Indeed, of the 2 072 518 affiliates to the ISSSTE in April 2007, only 294 736 chose the new DC system (14.2%). Therefore, it is likely that by the year 2052, most transitional workers will have retired under the current DB formula, while the generation who entered the labour market after April 2007 will start retiring with the new DC rules. Using CONSAR model for projecting DC replacement rates, Figure 4.3 illustrates the fall in replacement rates that one can expect for public-sector workers with 40 years of contributions earning three to six times the minimum wage and retiring over the next 65 years.[7] The higher the lifetime earnings level the sharpest the fall. The difference would reach 37 percentage points for people earning six times the minimum wage. Replacement rates for public-sector workers earning one or two times the minimum wage will not fall. Public-sector workers earning the minimum wage that chose in 2007 to stay in the old DB system get the minimum pension in the old DB system that represents 100% of the minimum wage. However, once the transition period is over public-sector workers that joined after 2007 will be getting the PMG that for public-sector workers is 200% of the minimum wage. Those earning two times the minimum wage get 100% of their wage under the old DB formula and the PMG once the transition is over, which also represents 100% of their income (two times the minimum wage).

Figure 4.3. **Evolution of replacement rates for public-sector workers retiring at 65 between 2015 and 2080, with 40 years of contributions and earning 1 to 6 times the minimum wage**

As a % of final salary



Note: The replacement rates for people retiring under the new DC system (as of 2053) are calculated assuming a 40-year career with a flat salary, 1.19% fees, 5.19% real rate of return and the social quota in force during the period November to December 2014. After the transition period is over, only public-sector workers earning from one to two times the minimum wage would receive the minimum guaranteed pension.

Source: CONSAR.

The fall in replacement rate is less dramatic for public-sector workers than for private-sector workers, thanks to higher contributions rates to their DC individual accounts. Table 4.2 shows how the contribution rate of 11.3% increases for those getting the social quota. The impact of the flat social quota on the total contribution rate decreases rapidly with income. During the last quarter of 2014, 99.6% of the public-sector workers affiliated to the ISSSTE with an active account received the social quota. However, there will be a reduction in replacement rates of more than 30 percentage points for certain income groups once everyone retires under the DC rules.[8]

Table 4.2**. Contribution rates for public-sector workers, according to multiples of the minimum wage**

	1 minimum wage	3 minimum wages	5 minimum wages	10 minimum wages
Retirement, severance and old-age	11.3	11.3	11.3	11.3
Worker	6.125	6.125	6.125	6.125
Employer	5.175	5.175	5.175	5.175
Social quota*	5.921	1.974	1.184	0.592
Total	17.221	13.274	12.484	11.892

Note: The calculation uses the social quota in force during the period November to December 2014.

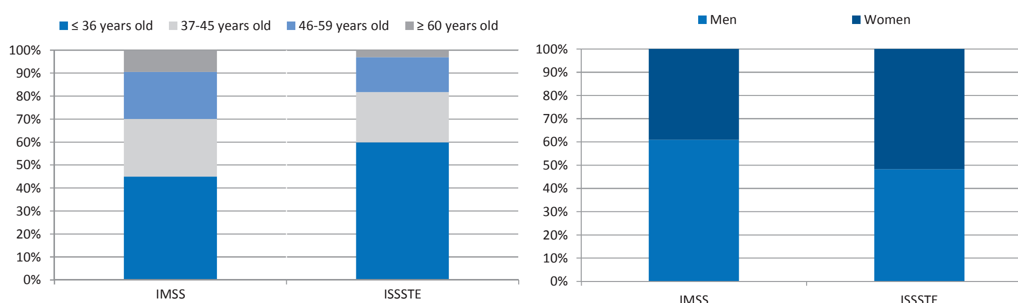
Source: Author’s calculations.

4.2. Low coverage rates and contribution densities compound the problem

The percentage of the working-age population having an individual retirement account as of December 2014 was 60%. This amounts to a total of 52 728 388 Mexicans. Of those, 51 242 289 are private-sector workers affiliated to the IMSS (97.2%), 1 222 947 are public-sector workers affiliated to the ISSSTE (2.3%) and 263 152 are self-employed workers (0.5%).[9]

The distribution of accounts by age, gender and income is different for private- and public-sector workers (see Figure 4.4 and Figure 4.5). Public-sector workers having an account are those who decided to switch to the new DC system in 2008 and all the new entrants in the public service since 1 April 2007. This explains why, compared to private-sector workers, ISSSTE account holders are younger. The proportion of women is also higher among ISSSTE account holders than among IMSS account holders, probably due a higher proportion of women working in the civil service. Finally, the distribution of account holders is more skewed towards low income levels (close to 60% of IMSS account holders have wages below 3 times the minimum wage, while close to 70% of ISSSTE account holders have wages below 3 times the minimum wage).

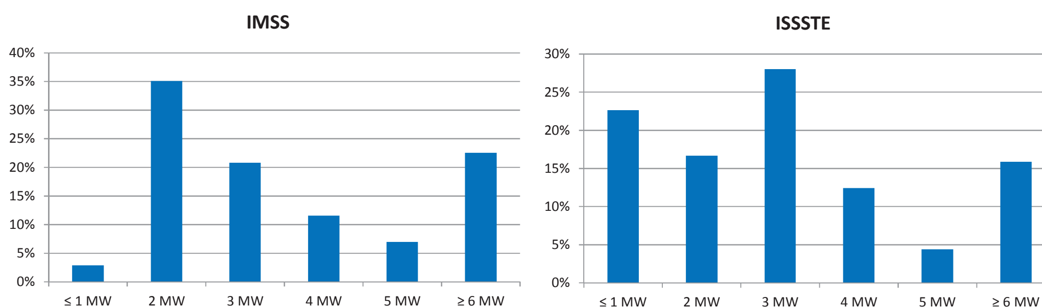
Figure 4.4. **Accounts administered by AFORE by age and gender**



Notes: Preliminary data for the last quarter of 2014. IMSS: Includes IMSS workers registered to an AFORE and assigned workers with money deposited in a SIEFORE. The breakdown by gender does not include assigned workers when their gender is not known. ISSSTE: Includes workers who have only contributed to the ISSSTE and do not have a social security number (pure ISSSTE workers) and workers currently contributing to the ISSSTE and have a social security number because they already have contributed to the IMSS in the past (mixed ISSSTE workers).

Source: CONSAR.

Figure 4.5. **Accounts administered by AFORE by income level**



Notes: MW = minimum wage. Data refer to the last quarter of 2014. IMSS: Includes workers currently contributing to the IMSS. ISSSTE: Workers who have contributed at least once during the last three years; includes workers who have only contributed to the ISSSTE and do not have a social security number (pure ISSSTE workers) and workers currently contributing to the ISSSTE and who have a social security number because they already have contributed to the IMSS in the past (mixed ISSSTE workers).

Source: CONSAR.

The number of active retirement accounts is below half of all accounts. According to CONSAR numbers that define active accounts as those in which at least one contribution had been made during the last three years, only 44.5% of the accounts were active during the fourth quarter of 2014.

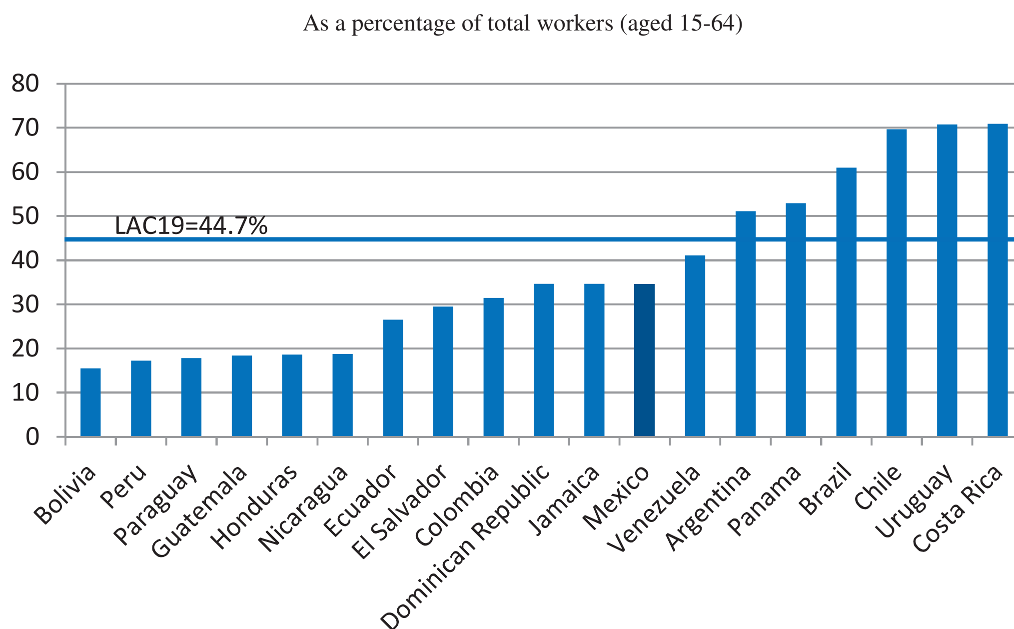
Workers with active accounts therefore only represent 30.0% of the working-age population. The proportion of active accounts is much larger among public-sector workers affiliated to the ISSSTE (78.5%) than among private-sector workers affiliated to the IMSS (49.0%) given more stable employment and lesser labour market informality.

The percentage of active accounts in Mexico is low when comparing internationally. Indeed, Bosch et al. (2013) compared the proportion of workers contributing to the pension system around 2010 in 19 countries of the Latin America and the Caribbean (LAC) region. With 34.7% of workers contributing to the pension system in 2010, Mexico is 10 percentage points below the LAC average (see Figure 4.6).

The main reason for the discrepancy between the number of workers having an account and the number of workers actively contributing to it is that many workers contribute intermittently to their individual retirement account. Indeed, the frequency or density of contributions for all account holders, according to CONSAR (2012), was about 38.2% in 2012 to both the IMSS and the ISSSTE. Additionally, the density of contributions is below 10% for 47.9% of workers (Figure 4.7). This means that out of 100 weeks of work, these individuals only contribute 10 weeks or less. At the other extreme, just a quarter of account holders contribute all the time or nearly all the time (90% to 100%) to their individual retirement account.

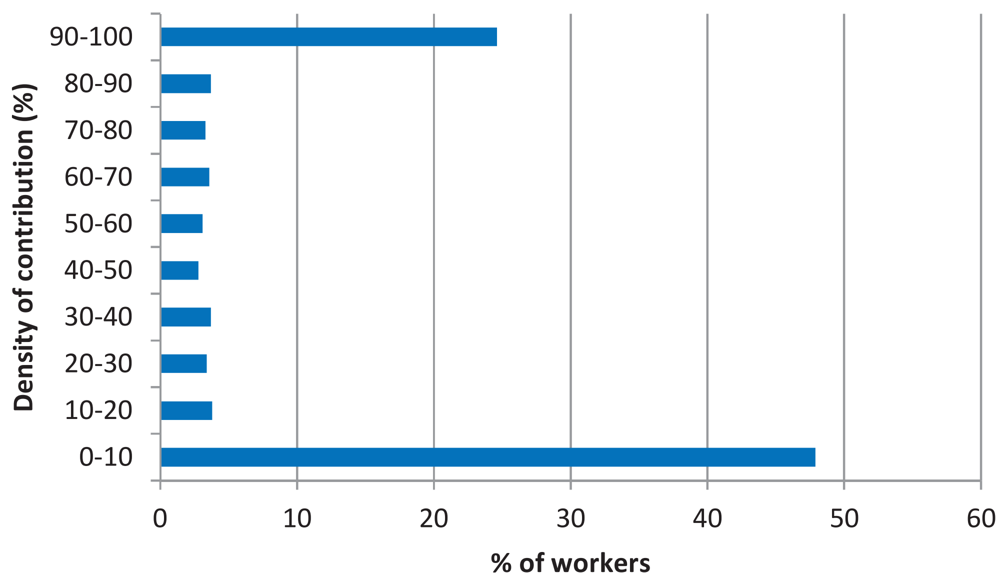
Figure 4.6. **Contributors or affiliates of pension systems in Latin America and the Caribbean, around 2010**

As a percentage of total workers (aged 15-64)



Source: Bosch et al. (2013).

Figure 4.7. **Distribution of density of contributions**

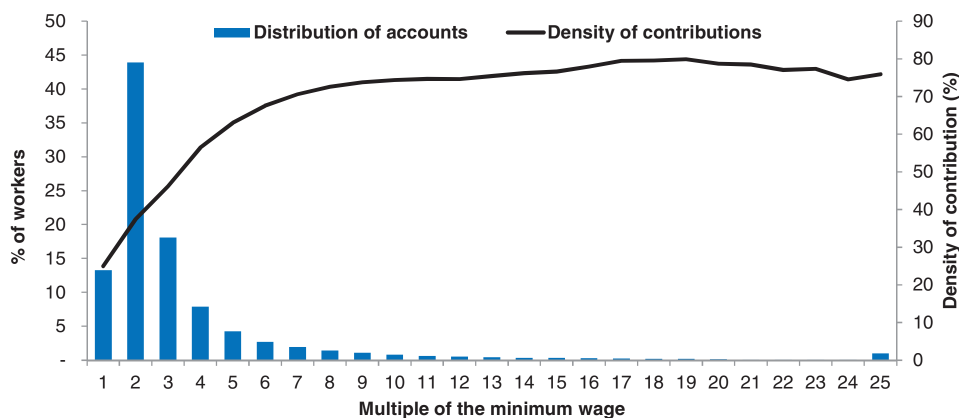


Note: Density of contributions calculated as the time a worker has been affiliated to a social security institution (IMSS and ISSSTE) as a percentage of total time that he/she could have been affiliated since he/she began to work.

Source: 2012 National Survey of Labour Paths (*Encuesta Nacional* de *Trayectorias Laborales*).

The frequency or density of contributions varies according to different socio-economic characteristics. Data on all IMSS account holders as of December 2013 show an average density of contributions of 44.4%, which is slightly higher for transitional workers (47.2%) than for workers who entered the labour market after 1997 (42.6%). In addition, for this last category of workers, the same data show a higher density of contributions for workers with a registered account (51.2% as opposed to 31.9% for workers with an assigned account), men (54.1% as opposed to 47.6% for women), younger workers and workers with high income (Figure 4.8).

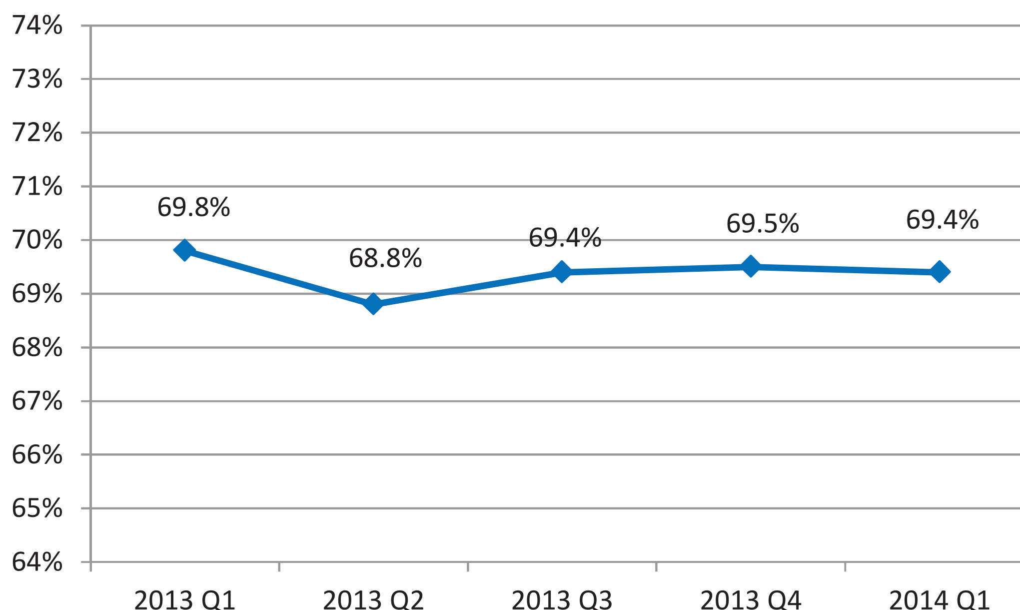
Figure 4.8. **Density of contributions of IMSS account holders by income level**



Source: CONSAR presentation “Sistema de ahorro para el retiro: Análisis de densidad de cotización histórica, cuentahabientes IMSS”, June 2015, mimeo.

The density of contributions for workers with active accounts is larger than for all account holders. Figure 4.9 below shows that between the first quarter of 2013 and the first quarter of 2014, workers who have contributed to their individual retirement account during the last three years, contribute around 69% of the time. This means that on average, they contribute 69 weeks for every 100 weeks of work.

Figure 4.9. **Density of contributions in active individual retirement accounts, IMSS**



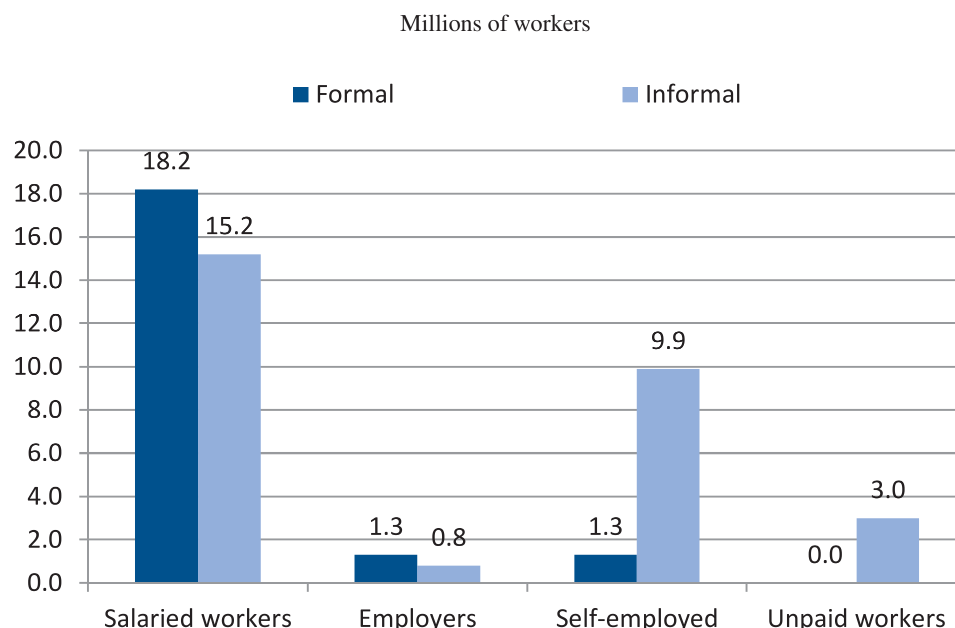
Note: Density of contributions during the last 36 months for workers who have contributed at least once during that period.

Source: CONSAR.

Finally, the low proportion of pension contributors, of active accounts, and of low densities of contributions is related to the level of formality and the transition to and from formality.[10] As shown in Figure 4.10, during the last quarter of 2014, there were 20.8 million formal workers, most of them salaried workers. At the same time, there were 28.9 million informal workers, representing 58.1% of all workers. Informal workers are common among salaried workers, self-employed workers and unpaid workers. They do not pay social security contributions, let alone pension contributions. Additionally, the number of people switching between informality and formality and vice versa during a 1-year period is around 13% according to the Mexican National Survey of Occupation and Employment (ENOE), and 24% over a five-year period.

Figure 4.10. **Formal and informal workers by type of employment, third quarter of 2014**

Millions of workers



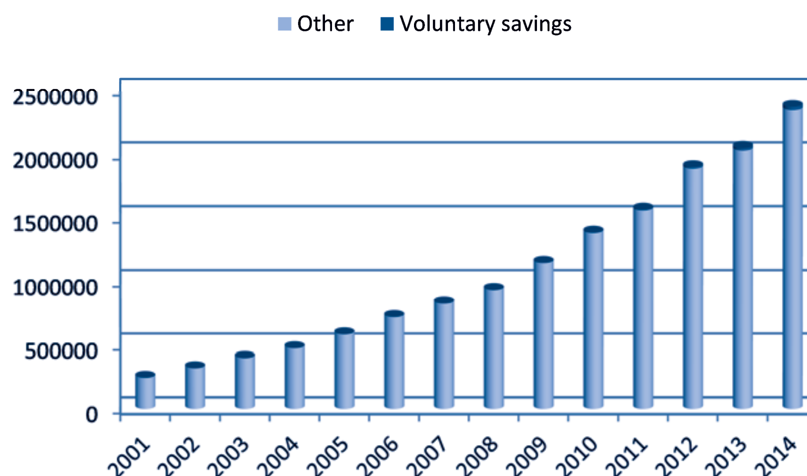
Source: National Survey of Occupation and Employment (ENOE).

4.3. Voluntary contribution levels are not sufficient to offset the fall in replacement rates

4.3.1. Voluntary contributions in the Retirement Savings System (SAR)

Voluntary savings made by workers and employers in the SAR are not high enough to complement the contribution rates in the mandatory accounts and prevent large replacement rate differences between workers retiring under the old DB formula and workers that would retire under the new DC rules. At the end of December 2014, total voluntary savings accumulated in the system only represented 1.1% of the net assets of SIEFORE (see Figure 4.11). There were 2 270 417 accounts with voluntary contributions and 299 132 accounts with solidarity savings at the end of August 2014.[11]

Figure 4.11. **Evolution of net assets and total voluntary savings**
Millions of pesos

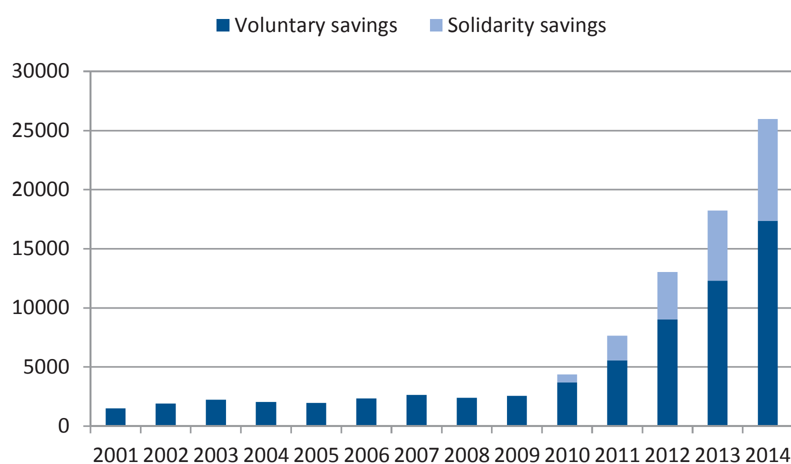


Source: CONSAR.

Despite that, Figure 4.12 shows that the solidarity savings for public-sector workers affiliated to the ISSSTE have been increasing rapidly since the programme was introduced in 2010, accounting for 33.2% of total voluntary savings as of December 2014. The direct and very generous government incentive (the government contributes 3.25 pesos for each peso contributed by the worker) explains this rapid growth. At the end of August 2014, about one-fourth of public-sector workers had a solidarity savings account, meaning that they had made a contribution under this programme at least once since 2010. As 76% of all contributions into solidarity savings accounts come from the state (by definition of the matching), the cost for the federal government may prove to be quite high (at the end of 2014, the total balance of solidarity savings accounts, including returns, was MXN 8 622 million).

Figure 4.12. **Evolution of voluntary savings and solidarity savings accumulated in the system, 2001-2014**

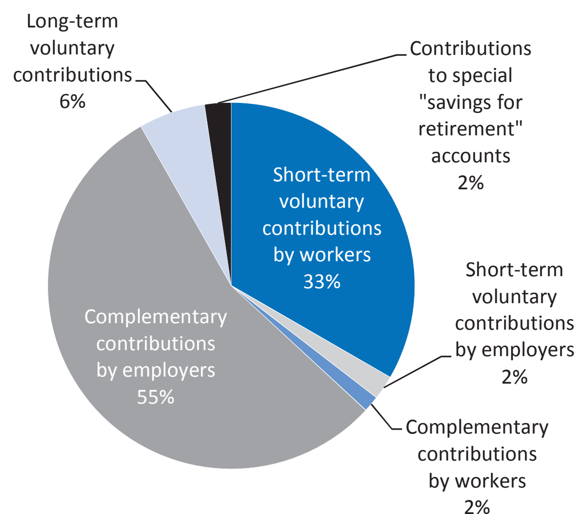
Millions of pesos



Source: CONSAR.

More than half of voluntary savings are done by employers through complementary contributions to individual retirement accounts. Short-term voluntary contributions by workers represent 33% of voluntary savings (see Figure 4.13).

Figure 4.13. **Composition of voluntary savings, December 2014**



Source: CONSAR.

4.3.2. Voluntary participation in occupational pension plans

Voluntary savings can also be done through occupational pension plans. These plans are not regulated by CONSAR, but employers have to register their plans with CONSAR in order to obtain fiscal benefits. The available statistics on occupational pension plans may therefore provide a partial view of this system, as it is up to the employer to register the plan or not.

At the end of May 2014, there were 1 930 occupational pension plans registered with CONSAR offered by 1 727 employers (some employers offer more than one plan). These plans can be DB, DC or hybrid (plans combining features of pure DB and DC plans, for example, a plan in which benefits depend on assets accumulated with some kind of guarantee, e.g. a minimum benefit level). As of that date, slightly more than half of the plans were pure DB plans, but the tendency is towards a reduction in the creation of such plans and an increase in hybrid plans.

Table 4.3. **Occupational pension plans by type**

Type of plan	Number	Percentage
DB	1 019	52.8%
DC	241	12.5%
Hybrid	670	34.7%

Source: CONSAR.

Voluntary savings in these plans may not address the sharp fall in replacement rates. Indeed, active members of occupational pension plans only represent 1.6% of the Mexican working-age population. The plans registered in 2014 cover 1 352 507 persons, of which 1 254 225 are active employees, 73 807 are pensioners and 24 475 are employees with deferred rights. The average age of active employees is 36.2 years old, while the average seniority in the job is 7.9 years. Pensioners are 65.8 years old on average. The median wage is 5.4 times the minimum wage for all active employees and is lower for people who entered the labour market after 1997 (median wage at 4.6 times the minimum wage) than for people from the transitional generation (median wage at 6.8 times the minimum wage), mostly reflecting age differences.

The plans managed MXN 496 068 million in 2014, representing 2.7% of GDP. During 2013, MXN 25 464 million have been contributed to such plans, 86% coming from employers. During the same year, MXN 24 710 million have been paid to beneficiaries.

There are concerns about the appropriate protection of members and barriers to setting up occupational pension plans. For example, there are concerns about the protection of workers' rights accrued in occupational pension plans as the regulation is far from clear on this. Ex-employees may not keep deferred rights in the plans and some of them may lose their rights when leaving the company.[12] In addition, workers have no recourse in case of sponsor insolvency when assets in the occupational plan are not sufficient to cover the liabilities.

In addition, the obligation of employers to pay a legal dismissal payment may reduce incentives to create occupational pension plans. Indeed, the Labour Law defines a legal dismissal payment of 3 months' salary plus 20 days' salary per year of service to be paid by employers upon the dismissal of employees without cause, such as dismissal due to old-age. This legal indemnity reduces the incentive to create occupational pension plans because employers have to pay the dismissal cost independently of any other benefit (pension) they may grant.

4.4. The tax treatment of retirement savings fails to provide the appropriate incentives to make additional voluntary contributions

The previous section has shown that voluntary contributions fail to offset the fall in replacement rates. The literature suggests (OECD, 2012a and 2012b) that a different tax treatment of private pension plans with respect to other saving vehicles may promote voluntary retirement savings. This section reviews the tax treatment of retirement savings in Mexico.

The design of the Mexican personal income tax system does not seem to create the appropriate incentives to make additional voluntary contributions. The tax treatment of pension contributions, investment income of pension funds and pension benefits varies according the type of contributions made and how amounts are withdrawn. This creates a complex system that many individuals may not be able to understand in order to take advantage of tax deductions/exemptions.

4.4.1. Tax treatment of contributions

In the Mexican personal income tax system, individuals pay taxes from the first peso of income earned. Marginal tax rates vary from 1.92% to 35% (Table 4.4).

Table 4.4. **Personal income tax brackets**

Lower limit (pesos)	Upper limit (pesos)	Fixed tax payment (pesos)	Tax rate applied on the excess to the lower limit (%)
0.01	5 952.84	0.00	1.92%
5 952.85	50 524.92	114.29	6.40%
50 524.93	88 793.04	2 966.91	10.88%
88 793.05	103 218.00	7 130.48	16.00%
103 218.01	123 580.20	9 438.47	17.92%
123 580.21	249 243.48	13 087.37	21.36%
249 243.49	392 841.96	39 929.05	23.52%
392 841.97	750 000.00	73 703.41	30.00%
750 000.01	1 000 000.00	180 850.82	32.00%
1 000 000.01	3 000 000.00	260 850.81	34.00%
3 000 000.01	--	940 850.81	35.00%

Source: Mexican Ministry of Finance.

Mandatory employer contributions to the retirement sub-account, as well as state contributions and social quotas are not considered as taxable income for the employee. The same applies to mandatory employer contributions to the housing sub-account. However, mandatory employee contributions to the retirement sub-account are not tax exempt.[13]

The tax treatment of voluntary savings contributions depends essentially on whether these savings have a long-term perspective or not. Short-term voluntary contributions, which can be withdrawn at any time after a period from two to six month depending on the AFORE, are not tax-exempt. They are made from after-tax income and therefore taxed at the individual's marginal rate of income tax. The same applies to solidarity savings. All the other types of voluntary personal contributions have a long-term perspective and are tax-deductible up to different limits, as described in Table 4.5.

Voluntary employer contributions to individual retirement accounts or to occupational pension plans are never considered as taxable income for the worker. However, the maximum deductible amount of contributions to occupational plans (12.5% of the employee's salary and up to 53% of total contributions to the occupational plan) includes both employee and employer contributions.[14]

There is a general limit in the income tax system for personal deductions. This limit is equal to the minimum between four times the minimum annual wage and 10% of the taxpayer's total gross income. The general deduction limit applies to the sum of all tax-deductible contributions.[15]

Table 4.5. **Tax treatment of pension contributions by workers, by type of contribution**

Type of contribution	Tax treatment	General deduction limit applies (lowest of 4 MW or 10% of taxable income)
Mandatory contributions to individual retirement accounts (IRAs)	Not deductible	
Short-term voluntary contributions	Not deductible	
Complementary contributions to IRAs	Deductible up to the lowest of 5 MW or 10% of taxable income	Yes
Long-term voluntary contributions to IRAs	Deductible up to the lowest of 5 MW or 10% of taxable income	Yes
Contributions to special "savings for retirement" accounts	Deductible up to MXN 152 000 per year	Yes
Solidarity savings	Not deductible	
Contributions to private occupational pension plans	Deductible up to 12.5% of salary (includes both employee and employer contributions)	Yes
Contributions to personal pension plans	Deductible up to the lowest of 5 MW or 10% of taxable income	Yes

Note: MW = minimum annual wage (MXN 70.10 in 2015).

Source: Mexican Ministry of Finance.

The fiscal incentive provided through the tax deductibility of some voluntary savings contributions is not an enticement for the majority of the population. Indeed, only workers with income above MXP 400 000 per year (18 times the minimum wage in the geographic area "A") are legally required to file an income tax return.[16] For workers with an income below that threshold receiving a salary from one employer only, this employer must declare the taxes withhold directly from the worker's salary. In that case, workers do not file an income tax return and therefore the deduction of their pension contributions is not direct. They have to ask the employer to make the contribution on their behalf and by this mechanism they can benefit from the fiscal deduction. According to the National Survey of Occupation and Employment (*Encuesta Nacional de Ocupación y Empleo*, ENOE), during the third quarter of 2014, only 6.7% of the employed population had a wage above five times the minimum wage (i.e. around MXN 123 000). A tiny proportion of workers is therefore required to file an income tax return and is likely to deduct pension contributions directly.

4.4.2. Tax treatment of investment income

Investment income is always tax-exempt as long as it stays invested. Upon withdrawal, investment income remains tax-exempt when generated by mandatory contributions to individual retirement accounts, long-term voluntary contributions to individual retirement accounts, contributions to special "savings for retirement" accounts, and contributions to occupational and personal pension plans.

The real interests earned from investing short-term voluntary contributions, complementary contributions to individual retirement accounts and solidarity savings is considered as taxable income upon withdrawal and taxed at the individual's marginal rate. A provisional withholding tax of 0.6% of the amounts contributed applies.[17]

4.4.3. Tax treatment of pension income

The tax treatment of pension income depends primarily on two factors: the form of payment and whether the individual is entitled to a pension when money is withdrawn (see Table 4.6). When workers reach retirement age and get benefits in the form of an annuity or programmed withdrawals, these benefits are tax-exempt up to an amount equivalent to 15 times the minimum wage. Benefits above this limit are taxed at the marginal rate. This limit applies to the sum of benefits paid by the federal government (DB benefits to transitional workers), by AFORE (individual retirement accounts), by occupational pension plans and by personal pension plans.

Workers entitled to a pension may also take their benefits in the form of a lump sum (for example, when they comply with the contribution period requirement and have accumulated enough assets to buy a life annuity equivalent to 1.3 times the minimum guaranteed pension, they have the right to buy such an annuity and withdraw the rest of the assets as a lump sum). In that case, the amounts withdrawn enjoy a yearly tax exemption of 90 times the minimum wage. The excess amount is considered as taxable income and is taxed at the average annual rate applicable to ordinary income.[18] However, lump sum payments originated from short-term voluntary contributions are tax-free, once the tax levied on real interests has been deducted.

Table 4.6. **Tax treatment of pension withdrawals, by type of contribution and form of payment**

Type of contribution	Annuity / programmed withdrawal	Lump sums	Withdrawal while not entitled to a pension
Mandatory contributions to individual retirement accounts (IRAs)	Exempt up to 15 MW; Excess taxed at marginal tax rate	Exempt up to 90 MW annually; Excess taxed at average tax rate	Exempt up to 90 MW for each year of contribution; Excess taxed at marginal tax rate with a temporary withholding tax of 20%
Short-term voluntary contributions	Not applicable	Exempt	Exempt
Complementary contributions to IRAs	Exempt up to 15 MW; Excess taxed at marginal tax rate	Exempt up to 90 MW annually; Excess taxed at marginal tax rate;	Taxed at average tax rate with a temporary withholding tax of 20%
Long-term voluntary contributions to IRAs	Exempt up to 15 MW; Excess taxed at marginal tax rate	Exempt up to 90 MW annually; Excess taxed at average tax rate	Taxed at average tax rate with a temporary withholding tax of 20%
Contributions to special “savings for retirement” accounts	Not applicable	Taxed at marginal tax rate	Taxed at marginal tax rate
Solidarity savings	Exempt up to 15 MW; Excess taxed at marginal tax rate	Exempt up to 90 MW annually; Excess taxed at average tax rate	Exempt up to 90 MW for each year of contribution; Excess taxed at marginal tax rate with a temporary withholding tax of 20%
Contributions to private occupational pension plans	Exempt up to 15 MW; Excess taxed at marginal tax rate	Exempt up to 90 MW annually; Excess taxed at average tax rate	Taxed at 30%
Contributions to personal pension plans	Exempt up to 15 MW; Excess taxed marginal tax rate	Exempt up to 90 MW annually; Excess taxed at average tax rate	Taxed at marginal tax rate with a temporary withholding tax of 20%

Note: MW = minimum wage.

When the worker gets a lump sum payment because he/she does not fulfil the requirements for obtaining a pension from his/her retirement sub-account (*negativa de pensión*), this payment is tax-exempt up to 90 times the minimum wage for each year of contribution. The excess amount is considered as sporadic taxable income and is subject to a temporary 20% withholding tax. The 20% withholding tax becomes final when the taxable income is less than MXN 123 580.20.

Amounts withdrawn before retirement from personal pension plans and retirement accounts constituted by complementary contributions and long-term voluntary contributions are considered as taxable income. A temporary withholding tax of 20% is applied on the capital and the updated interest income generated by that capital.

Finally, amounts withdrawn from the special "savings for retirement" account are considered as taxable income. However, the tax rate applied cannot be higher than the one in force at the time of the deposit.

Table 4.7 summarises the tax treatment of private pensions in Mexico. It shows that different types of contributions enjoy different tax treatments, even when they have a long-term perspective. For example, complementary contributions to individual retirement accounts and long-term voluntary contributions can both be withdrawn at retirement age only, but investment income is taxed for the former and not for the latter. This creates confusion for individuals who may have difficulties to choose the option that best suits them.

Table 4.7. **Tax treatment of private pensions, by type of contribution**

Type of contribution	Contributions	Investment income	Pension income
Mandatory contributions to individual retirement accounts (IRAs)	T	E	E
Short-term voluntary contributions	T	T upon withdrawal	E
Complementary contributions to IRAs	E	T upon withdrawal	E
Long-term voluntary contributions to IRAs	E	E	E
Contributions to special "savings for retirement" accounts	E	E	T
Solidarity savings	T	T upon withdrawal	E
Contributions to private occupational pension plans	E	E	E
Contributions to personal pension plans	E	E	E

Note: E = exempt up to a limit; T = taxed.

4.5. Low pension awareness

The main link between workers and their individual retirement account is the pension statement. This document has to be sent by the AFORE to each affiliate at least three times a year (in January, May and September). The main objective of the pension statement is to provide savers with clear and simple information to help getting information on the amount accumulated for retirement. It also allows comparing net returns between AFORE, therefore encouraging competition in the sector.

There are four different formats of pension statement for different types of workers:[19]

- "Generation AFORE": Public and private-sector workers who entered the labour market after the respective reforms took place (1 April 2007 and 1 July 1997 respectively), as well as public-sector workers who chose the DC system in 2008;
- "Transitional generation": Transitional private-sector workers who were working and contributing to the PAYG system in place before 1 July 1997;
- "Mixed IMSS-ISSSTE transitional generation": Transitional workers who have worked both in the public and private sectors and contributed to both the IMSS and the ISSSTE; and
- "Transitory DB regime": Public-sector workers who chose to remain in the old DB system in 2008.

All the pension statements include the following common information:

- The period covered by the pension statement;
- Personal data on the worker (name, personal ID code number, social security number);
- Contact details of the AFORE managing the individual account;
- Total amount of savings accumulated in the individual retirement account;
- A comparative indicator showing the net performance of each AFORE called the "Net Return Indicator" (*Indice de Rendimiento Neto*, IRN). The position of the worker's AFORE is highlighted to emphasise the relative performance of the AFORE;
- The asset allocation of the retirement savings;
- All the movements in the accounts that happened during the period covered by the statement by date (i.e. contributions paid by the worker, the employer and the state, returns earned on the portfolio, withdrawals made from the account and commissions paid to the AFORE managing the account); and
- An area where CONSAR and the AFORE can make publicity.

Two blocks in the pension statement are specific to each type of worker. For workers affiliated to the ISSSTE who have chosen the DC system in 2008 and transitional workers who have contributed both to the IMSS and the ISSSTE, the pension statement provides the amount in pesos of the recognition bond that recognizes their rights for the periods of time in which they made contributions in the ISSSTE until December 2007.

The last part of the pension statement is a general summary table of the worker's retirement savings over the period covered by the statement. For workers fully in the new DC system (generation AFORE), it has three lines for each of the main sub-accounts: the retirement sub-account, the voluntary sub-account and the housing sub-account. For the retirement sub-account and the voluntary sub-account, the table provides the account balance at the beginning of the period, the contributions paid, the withdrawals made, the returns earned, the commissions paid and the account balance at the end of the period. For the housing sub-account, the table provides the account balance at the beginning of the period, movements during the period and the account balance at the end of the period. For

transitional workers, the table separates the resources that the worker will be able to withdraw as a lump sum upon retirement from those that will be used to finance his/her pension.[20] For IMSS workers, the resources used to finance the pension correspond to the resources accumulated since 1997 coming from the severance at old-age and old-age contributions plus the social quotas. For ISSSTE workers, they correspond to the resources accumulated since 2008 coming from the retirement, severance at old-age and old-age contributions plus the social quotas, plus the solidarity savings, plus any resources left in the housing sub-account (FOVISSSTE). Finally, for public-sector workers who chose to stay in the old DB scheme (transitory DB regime), the table provides the contributions realised during the period for retirement insurance, severance at old-age and old-age, as well as the detailed information for the voluntary sub-account and the housing sub-account.[21]

Although the pension statement provides a lot of information to workers, it does not seem to engage members and encourage them to take active steps to improve retirement income adequacy by, for example, increasing contributions and/or postponing retirement. One of the reasons is because not all workers contributing to the pension system receive a pension statement. In particular, assigned workers with money deposited in a SIEFORE (i.e. workers contributing but who have not chosen an AFORE) may not receive their pension statement because the AFORE does not know their address. At the end of 2014, 20% of the 52 728 388 individual retirement accounts were assigned accounts with money deposited in a SIEFORE. According to the National Survey of Labour Paths (CONSAR, 2012), only 62.4% of workers having an account with an AFORE receive their pension statement regularly.[22]

In addition, the pension statement does not engage members because a large proportion of them do not even read it. The same survey shows that less than half of workers having an account with an AFORE consult their pension statement. The interest for the pension statement increases with age, as 42.4% of workers younger than 27 having an account with an AFORE consult their pension statement, while 53.0% do so among those aged 45 to 54. In addition, 24.3% of workers having an account with an AFORE do not understand what an AFORE is.

Furthermore, one could argue that transitional workers that will be better-off choosing their pension benefits according to the old DB formula may not have any incentive to increase contributions. Indeed, increasing contributions will not improve their pension benefits under the old DB formula. For those using the DC rule, the increase in contributions necessary to achieve the same replacement rate than in the DB formula is quite large.

The lack of interest in the pension system is linked to the low financial literacy of the Mexican population. According to the 2013 National Survey on the knowledge and perception of the Retirement Savings System, targeting private-sector workers affiliated to the IMSS aged 18 to 65, 66% of workers are not in the habit of saving. Of those who save, around 70% do so to face emergencies and only 7.2% save for retirement outside the AFORE. More than half of workers have not thought about how are they going to fund their retirement. About 56% of them hope they will get a pension replacing fully their salary, but only 27% actually save to reach that target. Finally, a large proportion of workers do not know the performance of their AFORE (67.5%) or the commission charged by their AFORE (74.2%).

Some recent new steps have been taken by CONSAR to increase interest in the pension system and stimulate additional savings. Starting in 2014, CONSAR requires

AFORE to send an annual pension report which contains an estimate of the future pension level, as well as voluntary savings scenarios. In addition, CONSAR launched at the beginning of 2015 two new simulators on its webpage for IMSS affiliates and self-employed workers to provide them with the opportunity to calculate their pension with different scenarios of retirement ages, densities of contributions and voluntary savings.

4.6. Proposals to smooth-out the transition period and to increase coverage, contribution levels and contribution periods

The main objective of any proposal to address the problems facing the Mexican pension system is to increase contributions and address the transition period. The level of contributions in the Mexican pension system is low by international standards and this level may lead, in the best case scenario, to pension benefits that may only replace around 30% of final salary. Moreover, because transitional workers can choose to get their pension benefits using the more generous old DB formula, that could give them on average a replacement rate of 100%, there will be as a result a sharp fall in replacement rates once the last transitional worker retires. Therefore, there is a need to address this and smooth-out the transition period.

This section ends with a discussion on how to increase coverage and density of contributions, and on how to improve the public confidence in and understanding of the pension system. The discussion on increasing coverage focuses on those groups, considered informal, for whom it is not compulsory to save for retirement (e.g. the self-employed).

4.6.1. Increase contribution levels

The first step to attenuate the sharp fall in replacement rates after the last transitional worker retires is to increase contribution rates, at least for private-sector workers. Everything else being equal, this would increase the pension income of workers who are fully in the DC system. This section discusses four options to reach this goal: i) increase the mandatory contribution rate; (ii) earmark for retirement part of the contributions to the National Housing Fund Institute for Workers; (iii) introduce automatic voluntary contributions with an opt-out option; and/or (iv) improve incentives for voluntary pension savings.

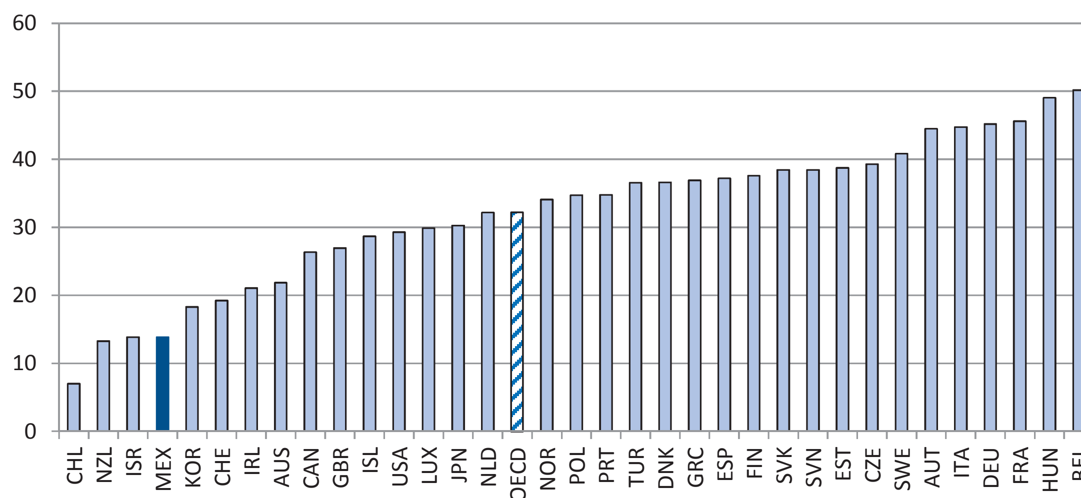
Increase mandatory contribution rates

This section discusses first whether there is room to increase mandatory contribution rates. It then describes how to increase overall contributions and how high they may need to increase to achieve different target replacement rates taking into account the risks facing saving for retirement (financial, labour market and demographic risks).

As seen in Figure 4.2, Mexico is one of the countries among the OECD and Latin America with the lowest mandatory pension contribution rates, especially for private-sector workers (around 8.5% for an average earner when including the social quota). In addition, the tax wedge on labour income in Mexico is low in OECD comparison (see Figure 4.14). There seems therefore to be room for increasing mandatory contribution rates in Mexico, in order to enhance workers' chances to reach higher retirement income.

Figure 4.14. **Average tax wedge on labour, 2013 (1)**

At 67% of average worker earnings, single person without children



1. The tax wedge on labour is measured as the difference between total labour compensation paid by the employer and the net take-home pay of employees, as a ratio of total labour compensation. It therefore includes both employer and employee social security contributions.

Source: OECD, Taxing Wages Database.

Increases in mandatory contribution rates need however to be considered in the broader labour market context. As shown in section 4.2, there is a large share of workers that are informal (do not contribute to social security), nearly 60% of all workers in Mexico. Moreover, there are important transitions from formality into informality and vice versa. Consequently, increasing mandatory contribution rates to the pension system may encourage some private-sector workers to move into informality to avoid paying those increased social security contributions. However, OECD work on informality in low-income OECD countries shows that other factors, apart from higher taxes on labour, can affect informal employment (OECD, 2008). In particular, binding minimum wages, preferential tax treatments for self-employed workers and complex tax systems may encourage informal employment. The work concludes that combined with enhancing incentives for formalisation and improving workers' perception of the value of the benefits they are likely to receive from social protection schemes, effective enforcement of labour, tax and social security regulations is essential to combat informal employment.

Therefore, any reform to the pension system, especially one increasing the mandatory contribution rate, would need to be accompanied by a well-designed communication campaign (OECD, 2014, Chapter 5). The national pension communication campaign should explain the main goal of increasing contribution rates: to increase pension income and ensure a better standard of living during retirement.

Contribution rates can be increased by expanding workers' contributions, employers' contributions or both. On the one hand, increasing workers' contributions would reduce their disposable income which for certain income strata is already low. On the other hand, employers are already paying most of the contributions (5.15 percentage points out of the 6.5% rate) and increasing their contributions may increase their labour costs and affect

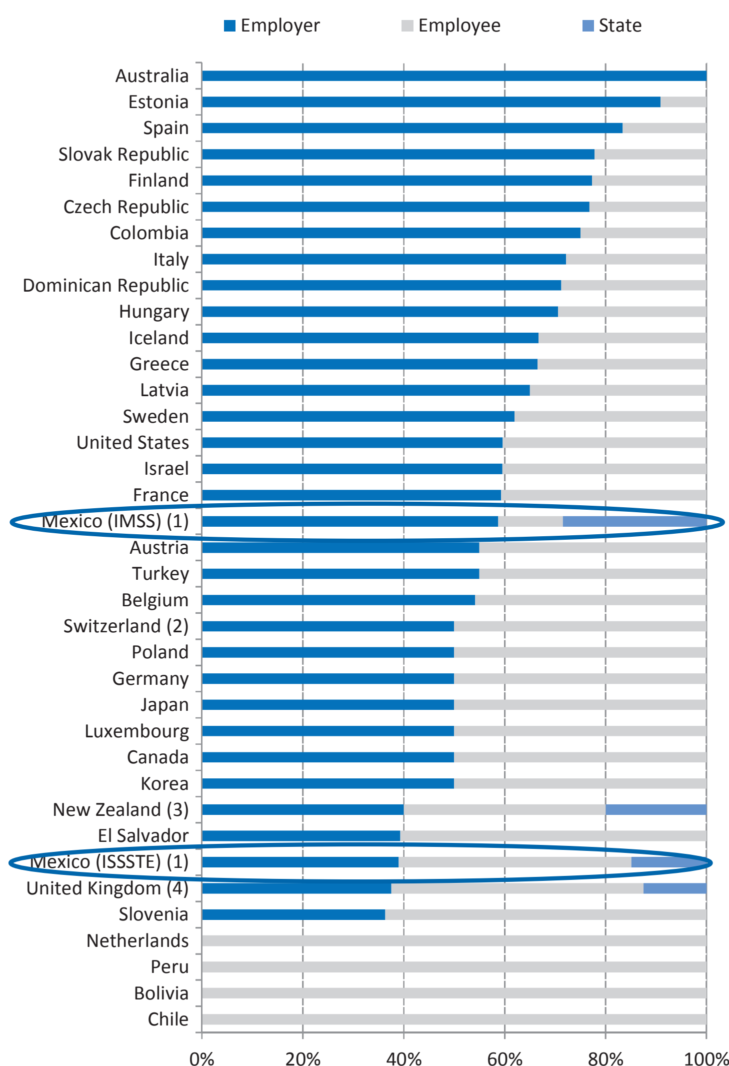
their international competitiveness, and in the medium to long-term would reduce disposable income as well.[23]

There is no unique distribution of pension contributions between employers, workers and the state. Figure 4.15 shows that, among selected OECD and non-OECD countries, the share of total contributions paid by employers varies from 100% in Australia to 0% in Bolivia, Chile, the Netherlands and Peru. In countries with a mix of sources to finance pension contributions, employer contributions represent between 91% in Estonia and 36% in Slovenia. On average across the countries represented in Figure 4.15, employer contributions represent 54% of the total pension contribution, employee contributions 44% and state contributions 2%. Usually, only employers and workers make pension contributions. Outside Mexico, state pension contributions can be found in the voluntary automatic-enrolment pension plans in New Zealand and the United Kingdom. In New Zealand (KiwiSaver plans), the state contributes 50 cents for every dollar of member contribution (minimum 3%, with a similar minimum employer contribution) annually up to NZD 521.43. In the United Kingdom, by October 2018, the state will contribute 1% of wages out of a minimum total contribution of 8% in automatic-enrolment plans.

The employees in Mexico do not seem to be paying as much of the total contribution rate as they do in most OECD countries. Indeed, one can observe in Figure 4.15 that the share of total contribution paid by private-sector workers is among the lowest, only in Estonia and Australia private-sector employees pay a lower share of total contributions (0% in Australia, 9.1% in Estonia and 12.8% in Mexico).

The increase in contribution rates could be done in a gradual automatic manner to allow all stakeholders to adjust to the cost of the change. In 2012, Australia enacted an increase in mandatory pension contributions from 9% to 12%. Initially, the increase was phased-in between July 2013 and July 2019. The full 12% contribution rate is now expected to apply from 1 July 2025. Under the new schedule, the contribution rate is planned to stall for 7 years at 9.5% (until 2021) and then increase by 0.5% each year until it reaches 12% by July 2025. The United Kingdom will phase in, between October 2012 and October 2018, the minimum contribution levels to the new automatic-enrolment voluntary scheme. The minimum total contribution rate (i.e. including employee, employer and state contributions) will be 2% until September 2017, then 5% between October 2017 and September 2018, and it will be 8% from October 2018 onward. Meanwhile, the minimum employer contribution rate will stand at 1%, 2% and then 3% respectively during those three periods.[24] Chile introduced a gradual increase in the salary subjected to the contribution rate for the self-employed, who are not obliged to contribute to the mandatory DC pension system. Starting from 1 January 2012, self-employed workers are expected to contribute 10%, just as employees in general, on 40% of their covered earnings in 2012, 70% in 2013 and 100% in 2014. The success of this measure has been limited so far as participation is voluntary.

Figure 4.15. **Distribution of the total pension contribution between employers, employees and the state in selected OECD and non-OECD countries, 2012 or latest available data**



1. State contributions include the social quota for workers with a wage equivalent to 3 times the minimum wage.
2. The contribution rate to mandatory occupational pension plans varies across age groups, from 7% between 25 and 34 years old to 18% beyond 55 years old. The graph uses the rate of 10% (for people aged 35 to 44).
3. Numbers refer to minimum contribution rates to KiwiSaver pension plans.
4. Numbers refer to minimum contribution rates to automatic-enrolment pension plans.

Source: OECD (2013) and OECD/IDB/The World Bank (2014).

Increases in mandatory contributions could alternatively be tied to growth in wages. Contributions would thus increase only if wages increase and therefore they will do so without leading to a reduction in workers' disposable income. Part of the wage increase would go to increase the workers' disposable income and the other part to increase their pension contribution. The share of the increase of wages going to higher contributions should be set clearly as a result of negotiations between the parties concerned. Obviously, the smaller the share of the growth in wages going to higher contributions, the longer it will take to reach the contribution rate that will provide a level of retirement income concomitant with people's expectations. This increase would be applied at the individual

level, meaning that two individuals working in a different industry may experience different wage increases and therefore may not contribute at the same rate in all periods. Each individual would have a different pace of increase, until reaching the targeted mandatory contribution rate.

Caps on earnings when calculating pension contributions (25 times the minimum wage for private-sector workers and 10 times the minimum wage for public-sector workers) could also be removed, at least for employee contributions. This would allow high-income earners to contribute on their full salary and increase their replacement rate.

The next question is therefore "what would be a suitable mandatory contribution rate for both public and private-sector workers?" This contribution rate depends first on the target replacement rate and needs to take into account the overall structure of the pension system.

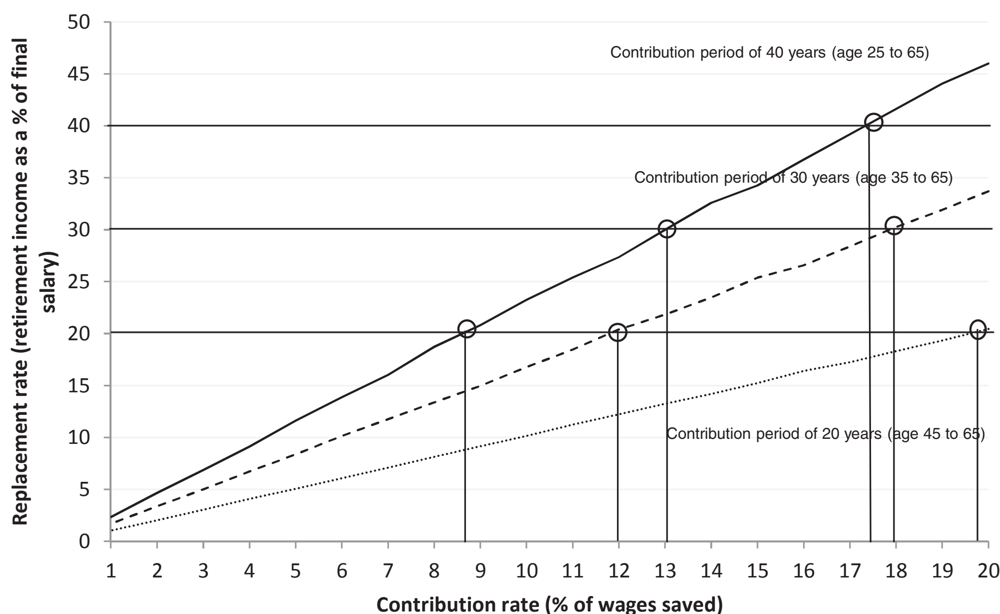
Target retirement income and contribution rate

Retirement income in DC pensions and their corresponding replacement rates depend on the level of contributions, the contribution period and other parameters that are uncertain (e.g. life expectancy, returns, discount rates, spells of unemployment).[25] Figure 4.16 shows how replacement rates increase as contribution rates increase, depending on the contribution period with a 95% probability.[26] For example, for a contribution period of 40 years (from age 25 to age 65), moving from a contribution rate of just below 9% to 13% increases the potential replacement rate, that can be reached with a 95% probability, from 20% to 30% all other things being equal.

Longer contribution periods allow for higher retirement income for a given level of contributions. The length of the contribution period determines for how long amounts contributed accumulate and benefit from compounding of interest. Hence, the longer the contribution period, the longer accumulated assets earn returns and the less money people need to put aside regularly to build assets to finance retirement. Consequently, the contribution rates needed to achieve a certain target retirement income with a 95% probability decrease with the length of the contribution period. Figure 4.16 shows that a target replacement rate of 30% might be achieved, on average, by contributing 13% over a 40 year period (age 25 to 65). However, if the contribution period is only 30 years, the amounts one would need to set aside to achieve the same replacement rate with the same probability would equal around 18% of wages. For a contribution period of only 20 years, a 30% replacement rate cannot be achieved with 95% probability with a contribution rate lower than 20%.

Increasing contributions raises the probability of reaching a given target retirement income and the associated replacement rate. Using the same methodology as for Figure 4.16, Table 4.8 shows the contribution rates needed to achieve different target replacement rates with various pre-established probabilities based on a 40-year career, a portfolio composed of 60% long-term government bonds and 40% equities, and a stochastic model. The table shows that, to reach a target replacement rate of 60% with a 90% probability, one needs to contribute 21.75% of his/her wage over 40 years. With a 15.5% contribution rate, the likelihood of reaching a 60% replacement rate falls to 75%. If policy makers set as a goal of the pension system to provide a pension income replacing 70% of the last salary with a 90% probability, the contribution rate needs to increase to 25.25%.

Figure 4.16. **Replacement rates reached with 95% probability according to different contribution levels and contribution periods**



Note: Contribution and replacement rates at the 5th percentile when assets are invested in a portfolio comprising 40% equities and 60% fixed income, assuming stochastic investment returns, discount rates, inflation, labour market conditions and stochastic life expectancy at age 65.

Source: OECD (2012a).

Table 4.8. **Contribution rates needed to achieve different target replacement rates with a given probability**

		Target replacement rate (RR)							
		30	**40**	**50**	**60**	**70**	**80**	**90**	**100**
Probability of reaching the target RR	**50**	5.3	7.0	8.8	10.3	12.0	14.0	15.5	17.3
	75	7.8	10.5	13.0	15.5	18.0	20.8	23.5	26.0
	90	11.0	14.5	18.0	21.8	25.3	28.8	32.3	36.3
	95	12.8	17.3	21.8	25.8	30.5	35.0	39.0	43.3
	99	17.3	23.3	28.5	34.5	39.3	45.8	51.5	57.0

Note: OECD calculations, which result from assuming uncertain investment returns, inflation, discount rates, life expectancy and labour market conditions. People contribute over a 40-year period, assets are invested in a portfolio comprising 40% in equities and 60% in long-term government bonds, and people are assumed to buy a nominal life annuity at age 65.

Source: Authors' calculations.

Therefore, contribution rates to achieve target replacement rates of the magnitude of those granted by the old DB formula and with a high probability are unrealistic. The pension benefits granted by the DB formula are too generous given current contribution rates. Therefore, the only way to smooth-out the transition period without increasing contributions to levels that are unrealistic would be to adjust downward the retirement income granted by the DB formula going forward and increase in parallel the contribution rates to the levels of other similar countries (e.g. 10% for all workers). Before elaborating this proposal, let's review additional proposals to increase contribution further without increasing labour cost, that is, using contributions already being disbursed.

Earmark for retirement part of the contributions to the National Housing Fund Institute for Workers

As a way to alleviate the country's pension gap, the current reform proposal approved by the Lower Chamber and pending approval by the Senate establishes the creation of a mixed individual account for unemployment, housing and pension purposes, using part of the contributions to the housing sub-account of private-sector workers, managed by the National Housing Fund Institute for Workers (INFONAVIT). Under the proposal, the current 5% employer contribution to INFONAVIT would be divided into two parts: i) a housing account which would continue to function as under the present system, but with the amount of contribution reduced from 5% to 2% of earnings; and ii) a new mixed account, in which the remaining 3% of the employer contribution would be placed.

This mixed account could be used for three purposes: unemployment benefits, mortgage payments or retirement income. As is already the case today, accumulated balances in both accounts could be used for housing finance, while future contributions to both accounts would be used for making mortgage payments. Similarly, any balances remaining in either account would be added to the individual retirement account at the time the worker becomes eligible for retirement. The main change would be that, at the same time, workers would be able to use the balance in the mixed account for unemployment insurance. Eligible individuals may collect unemployment benefits for up to six months, once every five years.[27] In addition, in contrast with the present situation, where INFONAVIT retains the funds in the housing sub-account even if the worker does not request a housing loan, under the current law proposal, the worker would be free to transfer the mixed account to the AFORE of his/her choice after July 2017. Therefore, workers willing to increase their future retirement income could either leave the funds in their mixed account with INFONAVIT or transfer it to an AFORE.

The main limitation of this proposal with respect to the objective of increasing the future retirement income of private-sector workers is that the resources in the mixed account are not earmarked for retirement. There is the risk that all the assets in the mixed account would be depleted at retirement, with workers drawing as many unemployment benefits as possible or using the fund for housing finance. There is therefore no guarantee that the creation of the mixed account would eventually increase replacement rates for private-sector workers.

Expanding on the reform proposal, one could go one step further and consider diverting part of the contributions to INFONAVIT directly to the DC individual retirement accounts. Earmarking part of INFONAVIT contributions for retirement would increase mandatory pension contributions, without increasing workers' and employers' total social security contributions.

Most pension stakeholders in Mexico seem to be in favour of diverting part of the housing fund contributions to the DC individual retirement accounts. They argue that the housing fund could perform its basic function of providing housing to low-income individuals with lower contribution rates. There is the question of why INFONAVIT needs captive funds from workers to finance loans to buy housing, when the banking sector could provide this without contributions. Moreover, affordable housing is provided in many other OECD countries without the recourse to contributions from workers into a housing fund. Finally, the rate of return on contributions to the housing fund has been disappointing (OECD, 2015a). It used to be paid by the operating profits of the institution, but seems in practice to have followed the growth rate of the minimum wage.

Currently, INFONAVIT follows a self-defined investment regime that resembles that of basic SIEFORE 2.

However, the unions and workers representatives seem to dislike the idea of shifting part of INFONAVIT contributions to the individual retirement accounts because then the money becomes earmarked for retirement and workers cannot have access to it to finance housing if needed.

Introduce automatic voluntary contributions with an opt-out option

Another option to increase overall contribution rates is to increase voluntary savings by nudging people in an automatic manner. This automatic voluntary contribution scheme would be accompanied by an opt-out option, giving workers the option not to contribute if they decide so.

Automatic enrolment has gained popularity in recent years to increase coverage in voluntary pension systems. It involves signing-up people automatically to private pension plans but giving them the option to opt-out within specified timeframes. Automatic enrolment aims to harness individuals' inertia in thinking about retirement and pension saving, while preserving individual choice and responsibility for the decision about whether to save in a private pension arrangement.

This mechanism could be implemented as follows. Starting from a given date, employers could deduct part of the workers' salary and pay workers' contributions to the voluntary sub-accounts of the DC system (preferably one of those having a long-term perspective where contributions cannot be withdrawn before retirement). Workers would have a specified timeframe (called opting-out window) to decide to opt out of the scheme, or do nothing and continue contributing. Chapter 4 of OECD (2014) identifies elements of the design of automatic enrolment schemes that may influence coverage and contribution outcomes, looking at the experience of implementing automatic enrolment in six OECD countries (Canada, Chile, Italy, New Zealand, the United Kingdom and the United States). In particular, it assesses the potential impact of the target population, the opting-out window, contribution rates, financial and non-financial incentives, and other pension plan characteristics, including default options.

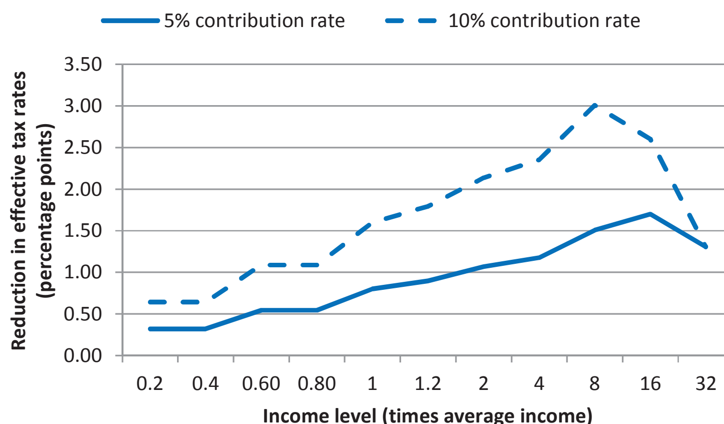
In the case of Mexico, matching contributions from the employer and/or from the state could also be envisaged for those who do not opt-out, as a way to encourage workers to contribute.[28] The next sub-section explores in greater details how incentives could be improved in Mexico to encourage further voluntary pension savings.

Improve incentives for voluntary pension savings

As long as they have a long-term perspective, voluntary pension savings enjoy tax advantages in Mexico in order to promote additional savings for retirement. Workers can deduct from their income tax base contributions up to four times the minimum annual wage or 10% of the taxpayer's total gross income, whichever is the lowest.[29] However, tax deductions give the greatest incentive to save for retirement to those with the highest level of income, as they are subject to the highest marginal tax rates. This is illustrated in Figure 4.17 with contribution rates of 5% and 10%. The deduction limit reduces the incentive, measured as a reduction in the effective tax rate, only for the very high-income workers. In addition, only workers with income above MXP 400 000 per year (18 times the minimum wage) are legally required to file an income tax return. Workers with an income below that threshold can ask the employer to withhold the tax due. This is

however uncommon. Therefore, in practice, the fiscal incentive is not an enticement for the majority of the population.

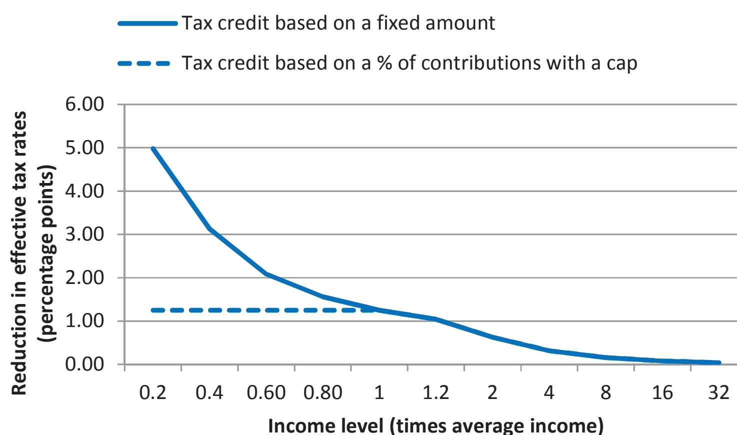
Figure 4.17. **Incentives of tax deductions for different contribution rates, by income**



Source: Authors' calculations using current tax brackets in Mexico.

An alternative way of introducing tax incentives that changes the incentive inversely with income is to use a tax credit (OECD, 2012). Tax credits entail that after calculating taxable income and applying the tax rates relative to the income brackets to determine the tax due, one can apply a deduction to the tax due. This deduction can be a fixed amount equal for all income levels or a percentage of contributions with a cap. In both cases the incentive of tax credits is lower for higher income individuals (see Figure 4.18). Replacing tax deductions with tax credits may therefore help increasing the incentive to make additional voluntary contributions among middle-to-low income individuals.

Figure 4.18. **Incentives of tax credits, by income**



Notes: The calculations assume a 5% contribution rate. The credit is equal to 25% of the amount contributed and the cap is equal to the credit for the average income.

Source: Authors' calculations using current tax brackets in Mexico.

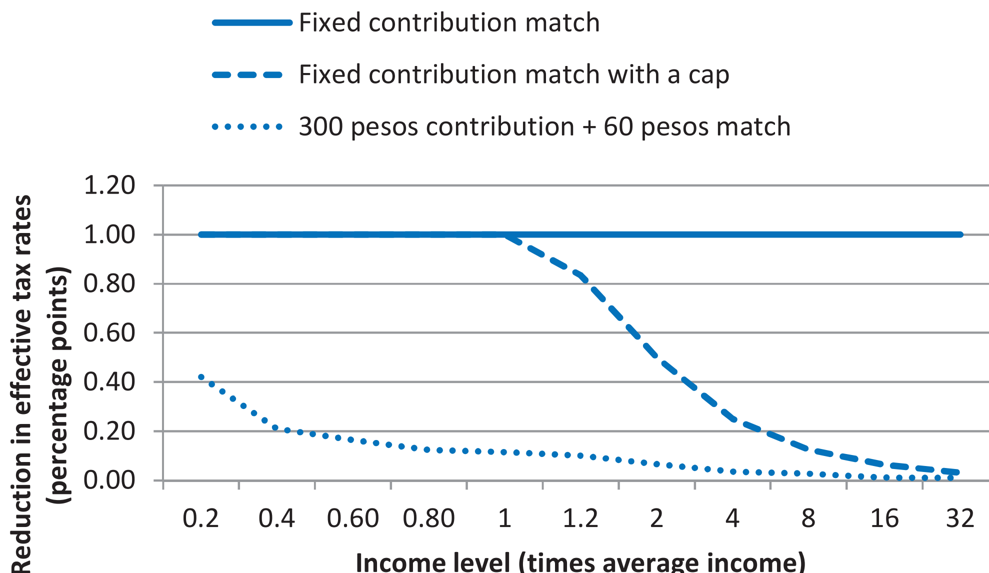
International evidence shows that, besides tax incentives, other types of financial incentives, in particular flat subsidies and matching contributions, have a positive impact on coverage and contribution levels in voluntary private pension arrangements. Moreover, flat subsidies and matching contributions seem to reduce the disparity in coverage rates by income level in voluntary systems. The Australian, German and New Zealand experiences (Chapter 4, OECD, 2012) highlight the strong impact that subsidies and matching contributions can have on coverage and contribution rates in voluntary private pension arrangements. The German experience suggests that flat subsidies have a positive effect on the coverage rate for low-income individuals, while the Australian case shows that matching contributions encourage higher contributions but are not necessarily effective in raising coverage among low-income groups. New Zealand, which combines both subsidies and matching contributions, achieves a similar income distribution of KiwiSaver members and the eligible population.[30]

There is already a matching contribution in the Mexican pension system for public-sector workers affiliated to the ISSSTE (the Solidarity Savings programme). People can contribute between 1% and 2% of their income voluntarily and the government matches each peso with 3.25 pesos. Since its introduction, the amount of voluntary contributions has increased (see Figure 4.12 above). However, this programme may prove very costly for the federal government, which effectively pays 76% of all the contributions to solidarity savings accounts.

There is a proposal to introduce matching contributions for private-sector workers affiliated to the IMSS.[31] Under the current proposal, voluntary savings would be complemented by an automatic contribution from the federal government equal to a fraction of workers' savings, up to a pre-defined limit. The government would contribute MXN 0.20 for each peso contributed, up to a maximum of MXN 60 per year (for MXN 300 of contributions from the worker).

However, the match may not be sufficient to entice private-sector workers to make additional voluntary contributions. Indeed Figure 4.19 shows this match in the dotted line, assuming that people contribute the maximum MXN 300. When comparing it to a typical fixed match contribution of 1 to 5 (solid line), less than the match for public-sector employees but more than for private-sector employees, it is clear that the proposed match for private-sector employees may be low as the reduction in the effective tax rate would be very limited. The figure also shows that establishing a cap after a certain income level (here the average income), dashed line, can have the expected results in encouraging voluntary retirement savings, while reducing its costs as the incentive falls for higher income.[32]

Figure 4.19. **Incentives of government matching contribution, by income**



Notes: The calculations assume a 5% contribution rate and a 1% matching contribution. The cap is equal to the match for the average income. The "dot" line represents the incentive provided by a MXN 60 matching contribution from the government for MXN 300 of contributions by the worker.

Source: Authors' calculations using current tax brackets in Mexico.

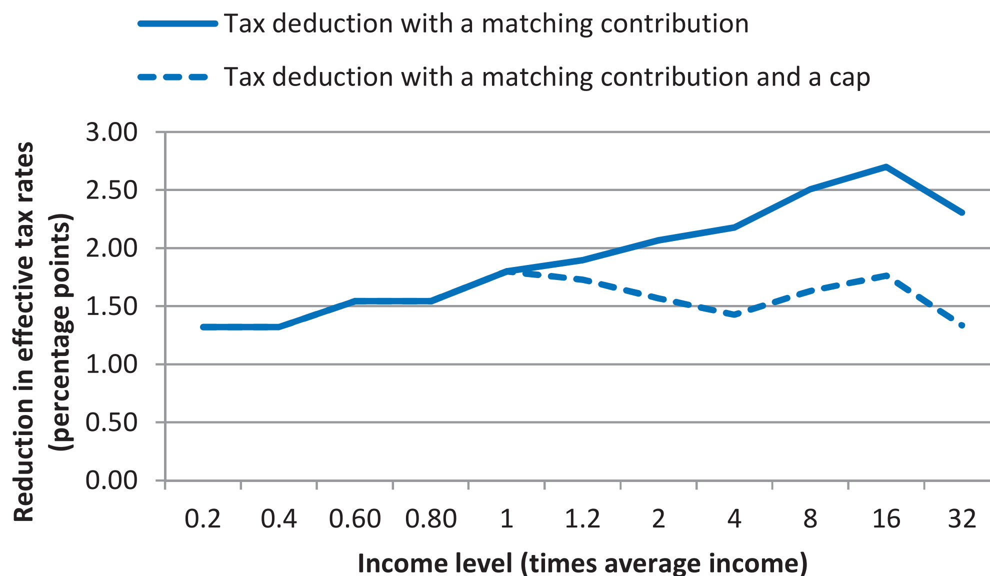
Mexico may consider applying other match rates, looking at international experience. As shown in Table 4.9, match rates in OECD countries (excluding Mexico) vary from 4.25% in Austria to 50% in Australia, Iceland and New Zealand. On the one hand, the Solidarity Savings programme, with a match rate of 325%, stands out as very generous and costly for the federal government. On the other hand, the proposal for private-sector workers, with a match rate of 20% up to an annual limit of MXN 60, may not be a sufficient incentive to encourage workers making additional voluntary contributions.

Finally, as regard matching, tax deductions combined with capped matching contributions can make tax incentives more neutral with respect to income. Figure 4.20 shows the overall incentive in terms of reduction in effective tax rates of having tax deductions of contributions and adding a matching contribution of 1 percentage point, given a contribution rate of 5%. The tax deduction increases incentives with income: adding the incentive of a 1 percentage point match just shifts the curve upwards, increasing the incentive but without changing the income structure of the incentive (solid line). However, adding a matching contribution of 1 percentage point with a cap on the match (e.g. a cap equal to the match for the average income) changes the tax incentive relationship with income by making it more flat (dashed line).

Table 4.9. **Matching contribution programmes in OECD countries**

Country	Description of the matching contribution programme
Australia	The super co-contribution is a government matching contribution for eligible individuals. The match rate is 50% since 2012-13. Individuals with an income below the lower income threshold (AUD 34 488 for 2014-15) can get 50 cents for each dollar contributed, up to the full maximum entitlement (AUD 500 for 2014-15). For every dollar that the individual earns above the lower income threshold, the maximum entitlement is reduced by 3.333 cents.
Austria	Personal contributions to a state-sponsored retirement provision plan can attract state matching contributions. The matching contribution rate corresponds to a fixed flat rate of 2.75% plus a variable rate depending on the annual general level of interest rate. For 2014, the variable rate is 1.5% (thus the total matching rate is 4.25%). As of 1 January 2014, the maximum personal contributions considered to calculate the state contribution is EUR 2 495.12 (thus the maximum state matching contribution for 2014 is EUR 106.04).
Chile	Workers making voluntary contributions and assigning those savings to increase or bring forward their pension are entitled to a state matching contribution, corresponding to 15% of the amount saved annually, subject to a limit. These funds are added to the individual capitalisation account each year. For each calendar year this contribution is limited to 6 UTM (*Unidad Tributaria Mensual* in Spanish, or Monthly Tax Unit).
Czech Republic	Employee contributions made into supplementary pension insurance plans are matched each month by the government according to the following scale: - CZK 230 if the individual contributes at least CZK 1 000 the same month. - CZK 210 if the individual contributes between CZK 900 and CZK 999 the same month. - CZK 190 if the individual contributes between CZK 800 and CZK 899 the same month. - CZK 170 if the individual contributes between CZK 700 and CZK 799 the same month. - CZK 150 if the individual contributes between CZK 600 and CZK 699 the same month. - CZK 130 if the individual contributes between CZK 500 and CZK 599 the same month. - CZK 110 if the individual contributes between CZK 400 and CZK 499 the same month. - CZK 90 if the individual contributes between CZK 300 and CZK 399 the same month. - CZK 0 if the individual contributes less than CZK 300 the same month.
Iceland	According to collective agreements, employers contribute minimum 2% to voluntary personal pension plans if the employee matches the amount with a least the same percentage. The most common contribution rate (employee and employer) is therefore 6% of the employee's salary when employees contribute their maximum percentage (4%).
Mexico	Solidarity Savings are a federal government matching mechanism to motivate public-sector workers affiliated to the pension system to make voluntary contributions. For each peso that the worker contributes voluntarily for retirement purposes, the federal government in its capacity as employer contributes 3.25 pesos. Workers can contribute either 1% or 2% of their salary.
New Zealand	The government makes an annual contribution towards KiwiSaver accounts as long as members contribute and are aged 18 and over (and satisfy some additional criteria). The government pays 50 cents for every dollar of member contribution annually up to a maximum payment of NZD 521.43.

Figure 4.20. **Incentives of adding matching contributions to tax deductions, by income**



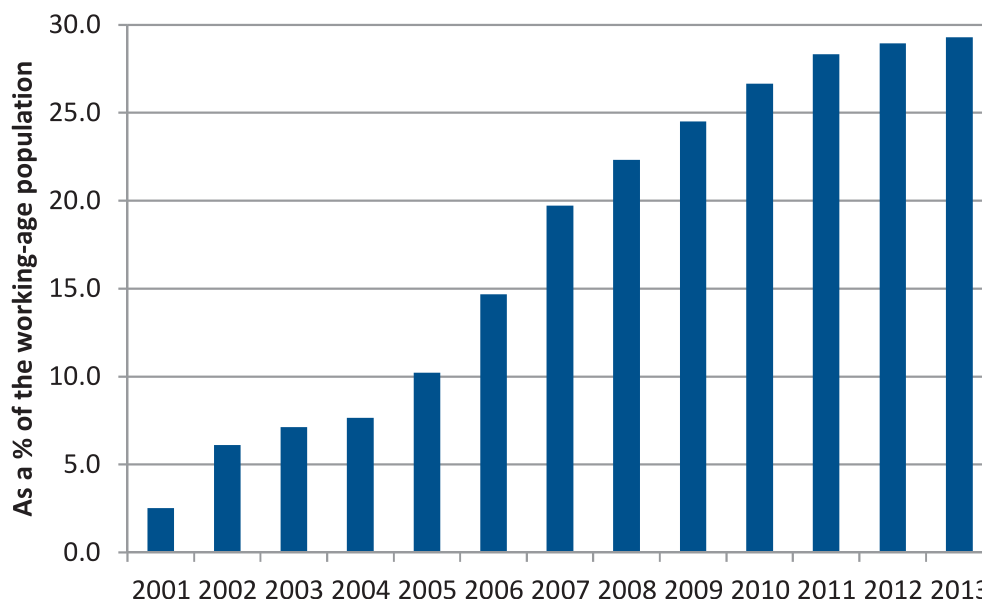
Note: The calculations assume a 5% contribution rate and a 1% matching contribution. The cap is equal to the match for the average income.

Source: Authors' calculations using current tax brackets in Mexico.

The international evidence also suggested that having subsidies may encourage voluntary contributions, especially for mid-to-low income people. The German experience suggests that flat subsidies have a positive effect on the coverage rate for low-income individuals.

Germany experienced an important increase in coverage, especially for low earners, thanks to the introduction of "Riester" pensions in 2001. Riester products can be purchased by anyone covered by the social insurance system and who is subject to full tax liability. Participants qualify for subsidies and tax relief from the state, the level of which depends on the respective contribution rate and number of children. To receive the full state subsidy, pension participants must invest at least 4% of their previous year's income in a Riester plan.[33] Since 2008, the basic annual state subsidy is EUR 154 for single persons, EUR 308 for married couples (when each partner has his/her own plan) and EUR 185 for every child (EUR 300 for children born in 2008 or after). Only very low-income households can get the full subsidy without investing 4% of their income if they contribute at least EUR 60 annually. This exception holds for people receiving minimum social benefits, low-income workers (earnings less than EUR 800 per month) and non-retired inactive people without income. The coverage rate of Riester pension plans was 29.3% of the working-age population at the end of 2013 (see Figure 4.21) and seems to have reached a plateau since 2011.

Figure 4.21. **Coverage over time of Riester pension plans**

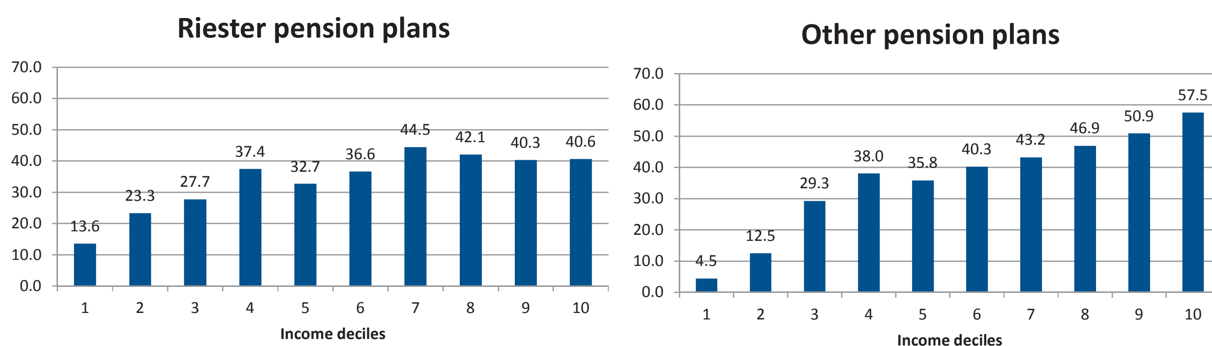


Source: German Ministry of Labour and Social Affairs.

Unlike occupational and other personal pensions in Germany, Riester pensions generally achieve a better distribution of coverage across income groups. Figure 4.22 shows the percentage of households where at least one of the partners is enrolled in a private pension plan other than a Riester plan (right panel) or in a Riester plan (left panel). When Riester plans are excluded, the higher the income of the household, the higher is the coverage rate of private pension plans. Coverage rates for Riester pensions are on the other hand more homogeneous across income groups and actually peak for individuals in the medium-income groups (4th and 7th deciles). The distribution of coverage rates by income is also more concentrated for Riester plans than for other private pension plans. In particular, Riester plans achieve higher coverage rates for low-income households (e.g. 13.6% of the labour force in the 1st decile) than other private pension plans (4.5%), even though the average coverage rate of Riester plans is lower. As Riester plans have been primarily designed so as to be accessible to low earners (through the minimum annual contribution of EUR 60 for people receiving minimum social benefits for instance), it is actually easier for them to get the full state subsidy. This is most probably the prime factor behind the comparatively high coverage rates among low earners.

Figure 4.22. **Coverage rate of private pension plans in Germany according to the income of the household and the type of plan, December 2008**

As a percentage of the labour force



Source: OECD calculations using the 2009 SAVE Survey.

The Mexican pension system already has the social quota that is a subsidy paid by the federal government in the mandatory individual retirement account. However, it is not used to promote additional voluntary pension savings.[34]

The Mexican authorities may want to consider introducing flat subsidies on the voluntary saving component of their pension system to promote higher voluntary savings, especially for mid-to-low income individuals. However, as the social quota on mandatory contribution does not seem to increase coverage much for private-sector workers, policy makers may need to consider that matching contributions may work better.

4.6.2. Introduce a pro-rata system for transitional workers

To smooth out the steep change in retirement income and replacement rates that would occur when the transition period ends, one needs to combine an increase in contribution rates with a pro-rata system for transitional public and private-sector workers. The increase in contribution rates that would be needed to completely offset the drop in pension income for public and private-sector workers when the transition period ends may be quite high, especially for private-sector workers. Figure 4.23 illustrates for reasonable increases in contribution rates (see dashed black line in Figure 4.23) that, although the sharp step would be attenuated, there would still be a marked difference between people retiring under the old DB system and those under the DC rules.[35] The steep change could be smoothed out further by applying a pro-rata system from today onwards for all transitional workers (see dotted black line in Figure 4.23).

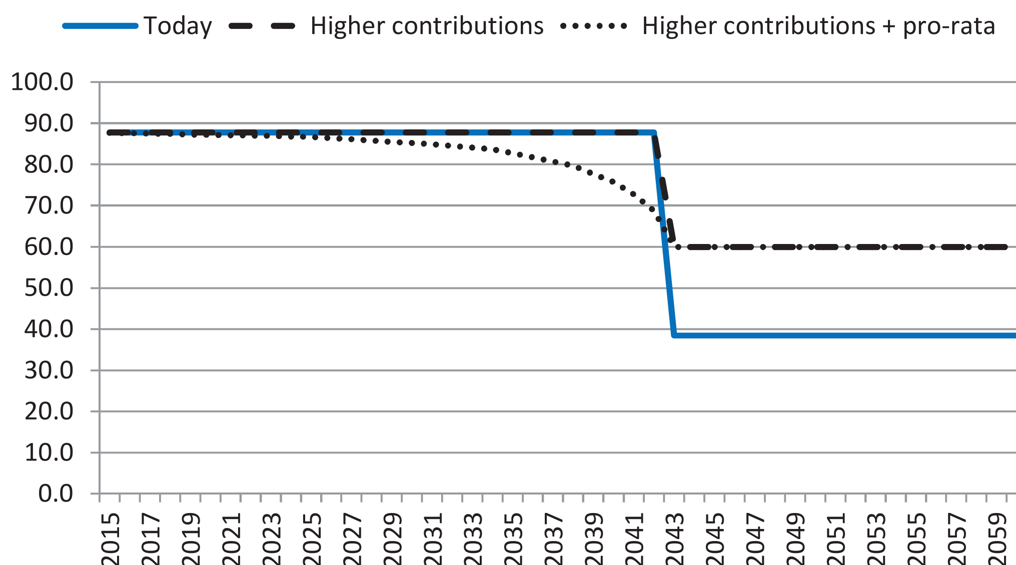
The pro-rata system is for all transitional workers, public and private-sector. All the pension rights earned under the old DB formula would be kept, but from today onwards, workers would only earn pension benefits under the DC rules, so their retirement pension benefits would comprise two components, DB and DC:

- DB component: The corresponding pension payment would be calculated based on the old DB formula and the number of years spent in the DB system up to today. Assets accumulated up to today in the individual retirement accounts of private-sector workers (plus the returns on investment until retirement) would partially finance the DB component. When this balance is depleted, the DB component would be then financed

from the federal budget. For public-sector workers that chose to stay in the old DB system, as they do not have assets accumulated, the DB component would be fully financed from the federal budget.

- DC component: New accumulation in the individual retirement accounts from today until retirement would be used to pay for the DC component. The corresponding pension payment would depend on returns on investment and the number of years to retirement.

Figure 4.23. **Illustration of the smoothing-out of the transition period**



This proposal would improve the new DC system. Firstly, it would make the new DC system look less unfair for workers that entered the labour market after the reforms where implemented (1997 for private-sector workers and 2007 for public-sector workers). However, transitional workers would see their potential pension benefits reduced, but those benefits were not fully backed by the current level of contributions, as discussed previously. Secondly, the sense of ownership for workers, especially transitional workers, of their individual retirement accounts would increase, thereby increasing financial discipline by both contributors and pension funds, and probably eventually limiting inefficient public spending.

The pro-rata proposal would also have an impact on government finances. Substantial savings would arise from lowering potential DB liabilities when applying the pro-rata system to private-sector workers. Currently, DB pensions for transitional private-sector workers choosing the old system at retirement are paid from the assets accumulated in their individual retirement accounts, which are transferred to the federal government. However, the contributions that built those assets are not enough to cover the benefits promised under the old DB formula. The government therefore needs to provide complementary finance. The introduction of the pro-rata system would limit the government payments and therefore its potential liabilities, as only DB rights acquired up to today would need to be covered. For public-sector workers that chose to stay in the old DB system, the government would experience an increase of expenses in the short-term as today's contributions would not pay any longer for today's pension benefits.

Contributions would instead accumulate in workers' individual retirement accounts. However, the pro-rata system applied to public-sector workers would reduce future government expenses because from today onwards their future pension benefits would be based on the assets accumulated in their individual retirement accounts.

4.6.3. Increase coverage and densities of contributions

The main reason why coverage and contribution densities are relatively low in Mexico, despite the mandatory affiliation of employees, pertains to the importance of the informal sector. [36] At the end of 2014, as much as 58.1% of workers were in the informal sector, therefore not contributing to the pension system. In addition, according to the National Survey of Labour Paths, many workers switch between formal and informal sectors several times during their career, leading to low contribution densities in the pension system.[37] Between January 2007 and July 2012, 17.1% of the workers had switched from formality to informality and 17.6% from informality to formality. Over the 5-year period, 24% of the workers had worked in both sectors. Reducing the informal sector is therefore a key policy objective in order to increase coverage and contribution densities in the pension system.

Introducing mandatory contributions for self-employed workers would help increasing coverage and contribution densities. By definition, most self-employed workers are informal as they do not have to contribute to the pension system. At the end of 2014, self-employed workers represented 22.5% of workers in Mexico. Only 11.6% of them are in the formal sector, as they make voluntary contributions to the pension system (see Figure 4.10). Implementing compulsory pension contributions for self-employed workers may not affect those already contributing voluntarily (11.6%) but it would have an impact on those who are informal (88.4%). Some of them may not be willing to pay social security contributions and would move back to informality, lowering therefore the impact of the measure. However, as long as the measure increases the number of people previously informal contributing to the system, it would have a positive impact.

Chile has introduced mandatory contributions for self-employed workers in a gradual manner. The pension reform of 2008 establishes the obligation for self-employed workers in a certain tax category to contribute to the private pension system starting from 1 January 2012.[38] Their participation was voluntary before that date. The law stipulates a gradual process of pension system affiliation and mandatory contributions between 2012 and 2015. During this period, pension contribution will be paid from the tax rebates owed to the workers unless the latter explicitly state that they do not wish to pay contributions. In addition, the share of covered earnings taken into account for contributions is gradually increasing, from 40% in 2012 to 70% in 2013 and 100% in 2014. From 2015, all eligible self-employed workers will have to contribute based on their full covered earnings with no possibility to opt-out. According to the Chilean Superintendence of Pensions, 304 011 self-employed individuals, representing 32% of those affected by the policy, automatically contributed to the pension system in 2013 based on their self-employment earnings of 2012. Only 11% of them did not have a DC account before and became new members of the pension system (all the others were already members of the pension system). In addition, 60% had already contributed to the pension system as employees during the year, so their contributions as self-employed came to fill the gap of contributions for the total income earned (as employee and self-employed). In 2014, 254 055 self-employed individuals contributed for their self-employment earnings of 2013, representing 27% of the targeted population that year.

The success of this policy has however been limited so far, as Chilean self-employed workers have largely used the temporary opt-out option. Indeed, 68% of self-employed individuals have decided not to contribute for the year 2012 and 73% for the year 2013. These high rates were observed despite the fact that only part of covered earnings were taken into account for contributions. One of the reasons for refusing to contribute may be the lack of willingness to lower net earnings due to the contributions to the pension system. This and other related factors explaining why only around 4% of self-employed workers were covered by the Chilean pension system before 2012 are likely relevant explanations for the high opt-out rates. Indeed, both income and employment of self-employed workers are unstable, which prevents them from contributing on a monthly basis. In addition, there is a lack of information regarding the benefits of contributing to the pension system and of a "pension culture", as well as preference for liquidity.[39]

4.6.4. Improve public understanding and confidence in the pension system

Find a better alignment between public and private-sector pensions

The fragmentation of the pension system (with special pension regimes for local governments, state universities and some state-owned companies) and the existence of different rules for public and private-sector workers in the SAR limits labour mobility and could undermine public confidence in the pension system. In particular, while new generations of public and private-sector workers all participate in the SAR, contributing into DC individual retirement accounts, the two groups of workers are subject to different rules and can expect quite different replacement rates. The main contrasting parameter is the contribution rate, which is much lower for private-sector workers (at 6.5% of the basic salary) than for public-sector workers (11.3% of the basic salary), and leads to significant differences in replacement rates.[40] For example, CONSAR estimates a replacement rate of 42.1% for a full-career private-sector worker earning four times the minimum wage, as opposed to 65.6% for a public-sector worker at the same earnings level.[41] In addition, public-sector workers benefit from advantageous conditions to make voluntary contributions through the solidarity savings programme, with a state matching contribution of 3.25 pesos for each peso that the worker contributes voluntarily for retirement purposes. There is no equivalent programme yet for private-sector workers and the current reform proposal envisages a much lower match rate of MXN 0.20 for each peso contributed.

There is a need to find a better alignment between public and private-sector pensions. As mentioned earlier, the OECD considers that contribution rates should increase in Mexico. Any reform affecting the contribution rate could be the occasion to make the two systems gradually converge on (i) the total contribution rate; (ii) the split between employer, employee and state contributions; and (iii) the social quota. Special regimes should also converge gradually in a view to harmonise the rules for all workers. Such convergence could increase public support in the pension system and improve labour mobility. In addition, the caps on earnings when calculating pension contributions (25 times the minimum wage for private-sector workers and 10 times the minimum wage for public-sector workers) could be removed for both types of workers. This would allow high-income earners to contribute on their full salary and increase their replacement rate.

Improve the information provided in pension statements

As Mexico is gradually moving to a DC pension system, the role of workers to build their own retirement income is increasing. Future pensions from DC pension plans

depend on workers' choices regarding which AFORE is managing their resources, how much to contribute (on top of mandatory contributions), when to retire and how to allocate assets accumulated at retirement. Therefore, in order to take these decisions, workers must understand the nature of their pension plan and the risks they face.

Pension benefits from DC pension plans are inherently uncertain. Future pension benefits from these plans depend on a number of factors such as returns on investment, discount rates, inflation, wages and employment, as well as life expectancy, all of which are uncertain. The difficulty in making decisions is that the changes in these factors are unknown at the time the decisions are made.

One important tool in helping workers manage this task is the pension statement. The OECD (2014) argues that the statement should provide clear and simple information about key facts. Moreover, the pension statement should be more than a passive document that delivers information, it should aim to engage workers and encourage them to take active steps to improve retirement income adequacy by, for example, increasing contributions and/or postponing retirement. Pension statements can also help in conveying the uncertainty about future pension benefits and provide projections about future benefits, although those projected pension benefits are never certain and workers need projections they can readily comprehend.

Another item that could be included in the pension statement is the total number of contribution weeks. This information would be very useful for those workers getting near retirement age to review whether the total number of weeks computed at the IMSS or the ISSSTE matches their labour history. If not, they could check this information with the corresponding institute and ask for a revision.

Statement organisers in Mexico should set clear and measurable objectives and introduce thorough evaluation processes. In the absence of robust evaluation, pension statements are unlikely to perform an optimal role in the communication of key information; they will not encourage members to take appropriate actions; nor will they support broader national DC communication programmes, for example in relation to pension reform and national financial literacy campaigns.

In 2014, the Mexican authorities organised the sending to all IMSS and ISSSTE affiliates of a document providing an estimation of their future monthly pension, assuming different rates of additional voluntary contributions. The objectives were to warn people about the low level of contributions in the pension system, stimulate higher voluntary savings and increase financial literacy. Using the actual current account balance in the worker's retirement account, the document estimates the likely monthly pension amount in case the worker starts contributing voluntarily 1%, 3% or 5% of his/her wage until retirement. An asterisk warns the individual that this estimation exercise has only an informative role and does not guarantee the ultimate amount of the future pension. Unfortunately, there has not been any evaluation of the impact of this document on workers' behaviour regarding voluntary contributions so far.

This simulation exercise could be generalised and added to the pension statement sent by AFORE. Starting in 2014, CONSAR requires AFORE to send an annual pension report which contains an estimate of the future pension level, as well as voluntary savings scenarios. However, including this report directly in the pension statement could have a bigger impact. It would help workers realise about the (low) level of their expected pension income. Providing different scenarios with different levels of voluntary contributions could prompt workers to react and take actions by starting making

voluntary contributions or increasing them. Different scenarios regarding the retirement age could also help people understand the positive impact of postponing retirement on pension income, as doing so increases assets accumulated to finance retirement and reduces the retirement period that those assets need to finance.

If one of the goals of the pension statement is to increase competition between AFORE, pension statements could also include a simulation of future pension income with different scenarios regarding investment returns and fees. The objective would be to make workers aware of the magnitude of the impact of the performance of their AFORE and of the fees they charge on future pension income.

Organise well-designed National Pension Communication Campaigns to better promote pension savings and increase financial literacy

In 2014, CONSAR launched a communication campaign to promote voluntary pension savings in 7-Eleven convenience stores. The objective of the campaign was to explain to workers that they can save easily in any of the 1 780 7-Eleven stores around the country, from MXN 50 and as often as they wish, with the possibility to withdraw their money. The campaign consisted of advertising the new savings programme in newspapers and TV spots both in Mexico City and in the different states.

Unfortunately, there is no evaluation of the impact of the campaign. Since the programme runs, there is no data on the number of people who have actually deposited money in their AFORE through 7-Eleven stores. In addition, feedback from individuals would be helpful to monitor the impact of the programme.

As future campaigns will probably take place to better promote pension savings and increase financial literacy, the Mexican authorities could learn from the experience in other countries regarding the design of National Pension Communication Campaigns (NPCCs). The OECD has carried out an analysis of NPCCs in different countries, covering all aspects of NPCCs, from design to implementation and evaluation. The main policy guidelines or lessons that emerge from that analysis are contained in Chapter 5 of the OECD Pensions Outlook 2014. The thrust of those recommendations is that NPCCs should be part of an overall national strategy; major events (e.g. pension reforms) call for specific NPCCs; successful NPCC are driven by clear, realistic, and well-targeted objectives that produce outcomes that can be measured, evaluated and monitored against their goals and processes; robust evaluation processes are essential; and NPCCs should avoid having many messages and focus on less accessible groups.

Notes

1. The OECD pension model additionally assumes 2% inflation, 1.25% real earnings growth and a 2% discount rate. Individual earnings (including the minimum wage) are assumed to grow in line with the economy-wide average. The OECD pension model in the case of DC plans, like in Mexico, uses the annuity formula to convert the amount of assets accumulated at retirement into a retirement income stream, and applies a 15% discount for charges and fees.

2. Estimations from CONSAR lead to higher replacement rates due to a different set of assumptions. Assuming a 40-year career with flat salaries, a real rate of return of 5.19% and administrative charges of 1.19%, they find replacement rates of 42.1% for

a worker earning four times the minimum wage (average) and 64.4% for a worker earning two times the minimum wage (median).

3. As of December 2014, 14 382 transitional workers have chosen to retire under the DC rules because they were entitled to the minimum guaranteed pension, which is higher than the minimum pension under the DB formula (respectively MXN 2 600.96 and MXN 2 046.74 in December 2014).

4. Active accounts are defined as those that received at least one contribution during the last three years.

5. These calculations assume a real rate of return of 5.19% and administrative charges of 1.19%.

6. A public-sector worker earning four times the minimum wage and contributing respectively 1% and 2% of his/her salary voluntarily can expect a replacement rate of 86.2% and 107.8% respectively thanks to the generous state matching programme.

7. The new DC pension system was introduced for public-sector workers 10 years after the one for private-sector workers.

8. The reduction in replacement rates may be partially offset for public-sector workers making additional voluntary contributions as part of the Solidarity Savings programme (see section 4.3).

9. The number of accounts held by private-sector workers affiliated to the IMSS are those which are registered with an AFORE as well as assigned accounts for workers who have not chosen an AFORE. It does not mean that 60% of working-age individuals are actually contributing to their accounts.

10. Formal sector workers are defined here as workers paying social security contributions.

11. As described in Chapter 2, Solidarity Savings is the state matching contribution programme for public-sector workers affiliated to the ISSSTE.

12. In the case of DC schemes, if an employee has been contributing to the plan, he/she can withdraw the resources when leaving the company.

13. The same tax treatment applies to contributions by public-sector workers who decided to stay in the old DB system.

14. The regulation to the Income Tax Law, from 2006, has not been updated to match the recent Income Tax Law amendments from 2015. This creates confusion as to the extent to which the tax deduction of contributions to occupational pension plans apply to DC and hybrid plans.

15. The general deduction limit also applies to other expenses such as hospital and medical expenses, funeral expenses and mortgage real interests.

16. The geographic area “A” covers Mexico City (Federal District) and its metropolitan area; the states of Baja California, Baja California Sur; the cities of Acapulco, Guerrero, Ciudad Juarez, Chihuahua, Guadalajara, Jalisco and its suburbs, Monterrey, Nuevo León and its metropolitan area, Hermosillo, Sonora, Matamoros and Reynosa, Tamaulipas and Coatzacoalcos, and Veracruz.

17. Individuals whose only taxable income is composed of interest income can consider the withholding tax as their final tax payment as long as these interests do not exceed MXN 100 000 per year.

18. Workers can also get the balances accumulated between 1992 and 1997 in the individual retirement account as a lump sum upon retirement. Those are also exempted from tax up to 90 times the minimum wage annually.

19. Explained versions of the four pension statements can be found on CONSAR website: www.consar.gob.mx/principal/nuevo_estado_cuenta_afores.aspx.

20. The resources that the worker will be able to withdraw as a lump sum are the resources left in the housing sub-account (only if he/she chooses the DB system), balances accumulated in the individual retirement account between 1992 and 1997, the amount corresponding to the retirement insurance contribution in the retirement sub-account (2% of the base salary paid by the employer) accumulated since 1997, and the voluntary savings.

21. The contributions for retirement insurance, severance at old-age and old-age do not accumulate in the individual retirement account but are paid directly to the ISSSTE to finance the old PAYG system.

22. According to the 2013 National Survey on the knowledge and perception of the Retirement Savings System, 58.7% of private-sector workers affiliated to the IMSS receive their pension statement less often than three or four times a year.

23. Ultimately, depending on the bargaining power of employees, increasing contributions may affect negatively workers' incomes.

24. In the case of the United Kingdom, contributions to the automatic enrolment scheme are voluntary and come as a complement to the mandatory pension contributions to the public PAYG system. For more details on the automatic enrolment scheme, see Chapter 4 of OECD (2014).

25. See OECD, 2012a.

26. The figure presents the contribution rates needed to achieve different target replacement rates with a 95% probability based on different career lengths, a portfolio composed of 60% long-term government bonds and 40% equities, and a stochastic model with uncertainty about returns, interest rates, inflation, life expectancy, employment prospects and career real wage growth paths (see Antolin and Payet, 2011).

27. For more details, see Chapter 5 of OECD (2015a).

28. An analysis of the fiscal cost of this proposal is out of the scope of this report.

29. This deduction limit applies to the sum of all tax-deductible contributions, see Section 4.4.

30. New Zealand removed the state "kick-start" contribution of NZD 1 000 as of May 2015 because it was considered too costly for the government.

31. This is part of the reform proposal currently pending approval in the Senate.

32. As a way of comparison, a 2% contribution rate under the Solidarity Savings programme for ISSSTE affiliates reduces the effective tax rates between 6.6 and 7.2 percentage points depending on income (between 3.3 and 3.6 percentage points with

a 1% contribution rate) due to the very generous matching from the federal government.

33. Both own contributions and state subsidies are taken into account to calculate this rate.

34. The social quota for private-sector employees is progressive and decreases with income, while for public-sector employees it is a flat subsidy equal for all workers with less than ten minimum wages.

35. The illustration in Figure 4.23 is the same for private and public-sector workers, although the parameters would be different.

36. There are different types of informal workers, (i) the self-employed or independent workers, who are not obliged to participate in the mandatory individual retirement account system, and (ii) other workers who, despite having to participate and contribute, somehow fail to make contributions.. For a "legalistic" or "social protection" definition of informality, see Gasparini and Tornarolli (2007).

37. The National Survey of Labour Paths was a special module of the National Survey of Occupation and Employment conducted in 2012.

38. The policy targets self-employed workers who personally carry out an activity by which they obtain work income taxed under Article 42 No.2 of the Income Tax Law. All male workers who are at least 55 years of age, and female workers who are at least 50 years of age, as of 1 January 2012, are exempt, as well as self-employed workers who have an early retirement benefit or who are members of a pension institution of the old PAYG system, of the Social Security Department of the Chilean Police Force or of the National Defence Social Security Fund. Self-employed workers for whom it is difficult to determine their income and oversee their contributions, such as agricultural and fishery workers and micro entrepreneurs, are not covered by the automatic enrolment programme. Participation in the pension system remains voluntary for them.

39. It is also argued that separating pension contributions from other social contributions (e.g. health care) for self-employed workers could make more tolerable for the self-employed to accept introducing mandatory pension contributions, and it could increase their participation in the pension system.

40. The cap applied to the basic salary to calculate pension contributions is lower for public-sector workers (10 times the minimum wage) than for private-sector workers (25 times the minimum wage). This reduces the effective contribution rate for high-income earners more heavily for public-sector workers. However, less than 10% of paid workers receive an income higher than 5 times the minimum wage. The cap is therefore not binding for most workers.

41. The calculations assume a 40-year career with flat salaries, a real rate of return of 5.19% and administrative charges of 1.19%.

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